6947 Columbia Place
St. Louis, MO 63130

Jan. 24, 2013

Mr. Dan Gravatt, Site Manager

West Lake Landfill – St. Louis

U.S. Environmental Protection Agency

11201 Renner Blvd. -- Lenexa, KS 66219

Dear Mr. Gravatt:

At the EPA's Jan. 17 public meeting, here in St. Louis, regarding West Lake Landfill, I submitted a copy of the February 1989 St. Louis Post-Dispatch series on the dispersed Mallinckrodt Chemical Works radioactive waste sites.

I did not realize at the time that the article reprints I gave you were not all of good quality. I am therefore enclosing a composite of the original articles.

I hope you will find them of interest.

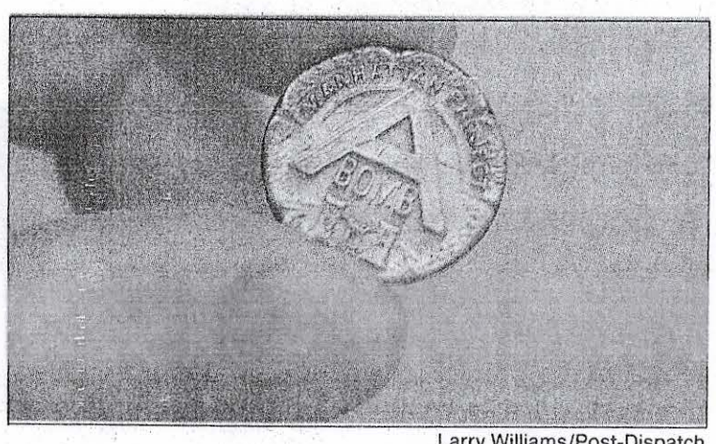
Sincerely,

Arlene Sandler

ST. LOUIS POST-DISPATCH

SPECIAL REPORT

Legacy Of The Bomb



Larry Williams/Post-Dispatch

A commemorative lapel pin given by the old U.S. War Department to Mallinckrodt Chemical Works employees who worked on the atomic bomb.

St. Louis Nuclear Waste

Larry Williams/Post-Dispatch

The Berkeley ballfields in North County lie barren. They were closed last summer because of radioactive contamination.

St. Louis's legacy of radioactive waste is a problem that defies any easy solution.

The waste is in buildings and behind fences posted with yellow and purple caution signs. It is in unmarked ditches and fields and beneath plastic tarpaulins.

In total, there are more than 2.3 million cubic yards of contaminated material in St. Louis, north St. Louis County, Jefferson County and, possibly, nearby Illinois.

St. Louis inherited the waste from the nation's race to produce the atomic bomb in World War II and from the subsequent push to make more nuclear weapons during the Cold War.

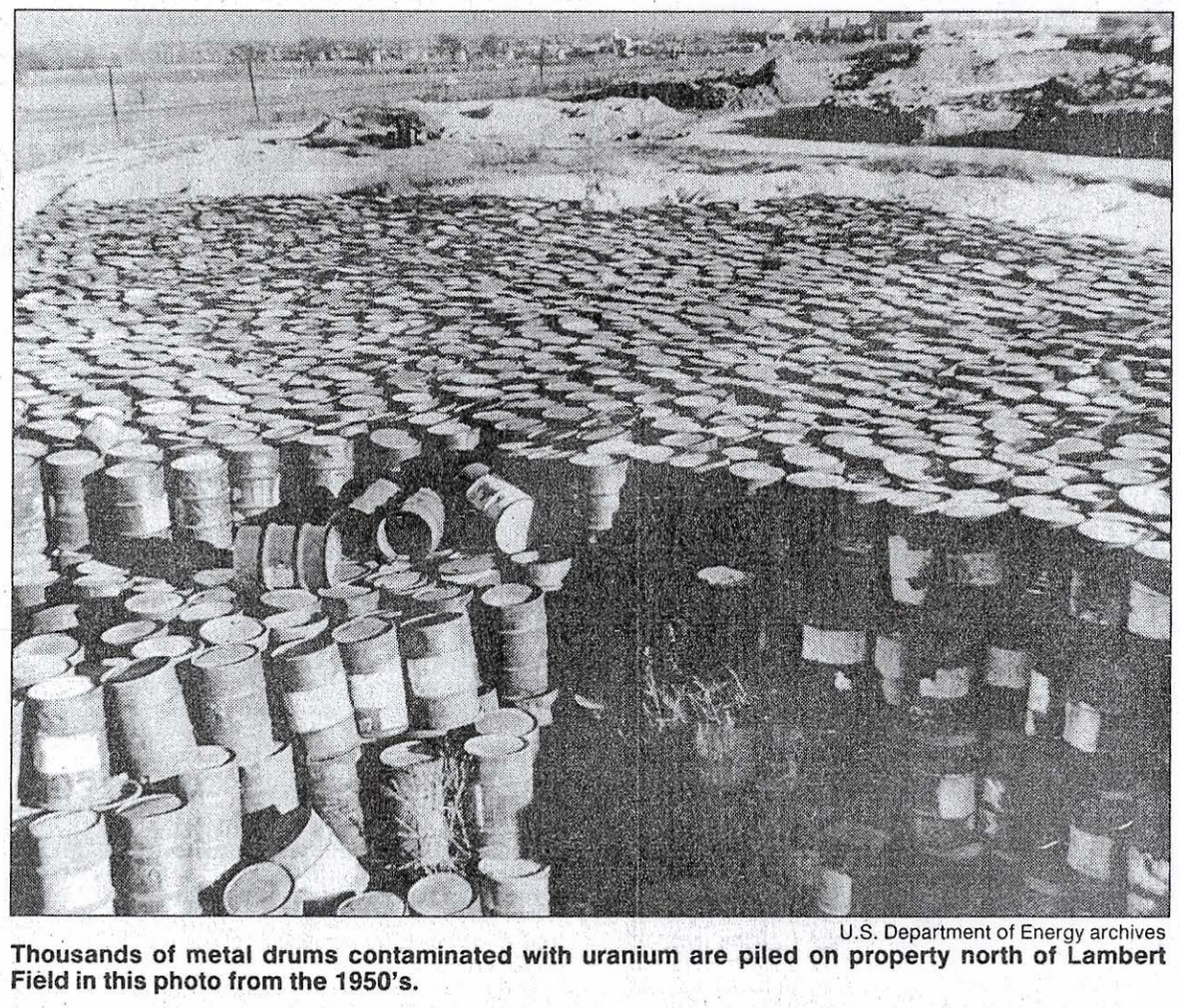
Most scientists say this low-level waste is hazardous to human health, at least to some degree. Almost all say it should be cleaned up.

The price tag for that exceeds $700 million.

A seven-part series, which ran in the St. Louis Post-Dispatch Feb. 12-19, tells:

- How Mallinckrodt Chemical Works purified uranium for the atomic bomb.
- How little was known about the risks of radiation.
- How nuclear waste was dumped and spread in North County.
- How the uranium processing plant near Weldon Spring became the area's most contaminated site.
- How citizens of St. Charles County waged war to win federal cleanup efforts there.
- How the government lost track of four sites where nuclear matter was processed or stored.

The stories also discuss the ongoing health debate and, finally, the area's options for dealing with this "Legacy of the Bomb."



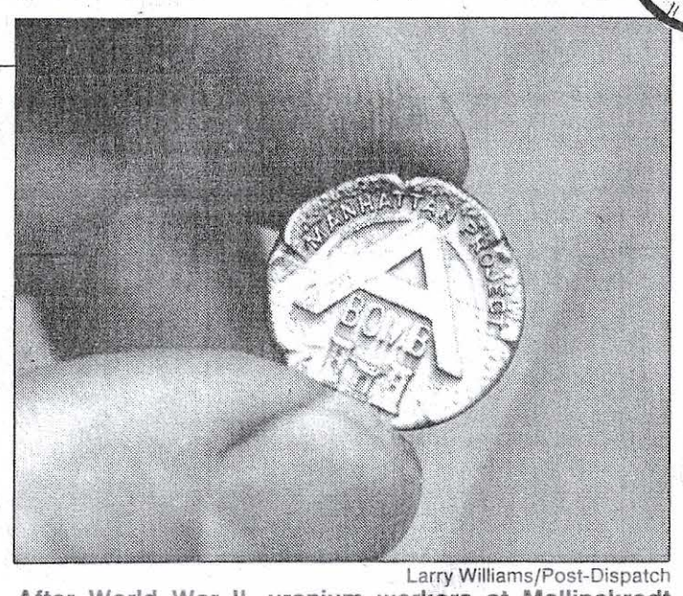
U.S. Department of Energy archives

Thousands of metal drums contaminated with uranium are piled on property north of Lambert Field in this photo from the 1950's.

This series appeared in the St. Louis Post-Dispatch, February 12 through February 19, 1989.

Part One

By finding a way to purify uranium needed for the atomic bomb, Mallinckrodt Chemical Works of St. Louis accomplished "a technological and industrial miracle" during World War II. Company officials and employees in this top-secret operation were "proud as sin" after they finally realized their role in the war effort. As they worked 14-hour days, seven days a week, they never dreamed that radioactive contamination might one day be a major problem here.
Page 3



Larry Williams/Post-Dispatch

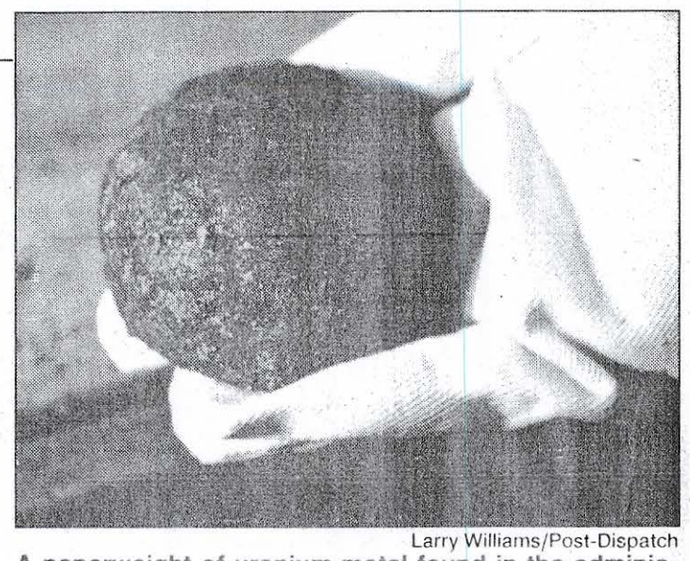
After World War II, uranium workers at Mallinckrodt Chemical Works received this commemorative pin.

Part Two

Mallinckrodt was a leader in taking precautions against possible health risks from exposure to radiation. But despite some seminars and warnings to be careful, most early workers had no reason to feel much concern. After all, in those days, no one actually knew what the risks were.
Page 5

Federal researchers now have found an elevated number of deaths from three kinds of cancer in a preliminary study of Mallinckrodt uranium workers. But much research of low-level radioactivity remains to be done.
Page 6

Federal tests show 15 buildings at the Mallinckrodt complex in North St. Louis still are contaminated.
Page 6



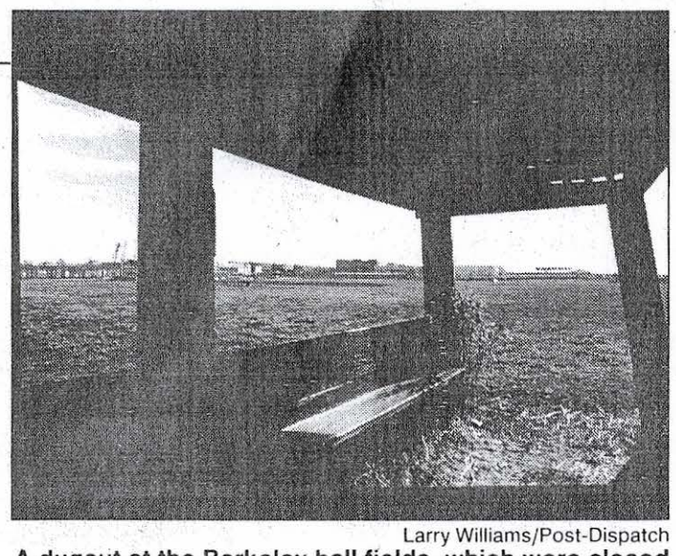
Larry Williams/Post-Dispatch

A paperweight of uranium metal found in the administrative offices at the abandoned Weldon Spring plant.

Part Three

After World War II ended in 1945, the government began disposing of radioactive waste that had piled up at the Mallinckrodt plant. Continuing their top secret operations, they transported the waste materials to a 21.7-acre landfill near Lambert Field. Eventually, the waste was spread to several other sites in North St. Louis County.
Page 7

Until 1978, few people in the St. Louis area knew about the radioactive waste here. Then, a chance meeting between a nuclear physicist from Cornell University and a nuclear-disarmament activist from St. Louis gave birth to the local protest movement against radioactive waste.
Page 8



Larry Williams/Post-Dispatch

A dugout at the Berkeley ball fields, which were closed last year because of radioactive contamination.

Part Four

In an effort to process more uranium during the Cold War, Mallinckrodt moved its nuclear operations into a spanking new government-owned plant near Weldon Spring. The Atomic Energy Commission proclaimed the $57 millon complex a showplace of technology. Workers called it "The clean one." But now, the abandoned plant is the single most contaminated part of the St. Louis area. The government has just begun a cleanup of the site. The estimated price tag: $400 million.
Page 9

Charles Reed was one of several hundred men who worked on a previous attempt to clean up Weldon Spring, two decades ago. He says his exposure to contamination there ruined his health.
Page 9

Larry Williams/Post-Dispatch

Contaminated machinery at the abandoned Weldon Spring plant has been covered with plastic-like foam.

Part Five

Nobody gave the situation at Weldon Spring much thought until area residents read in the newspapers of July, 23, 1982, that waste from five states might be transported to the site, which is only half a mile from the local high school. Parents, fearing for the safety of their children immediately were up in arms. They blocked the five-state plan and successfully lobbied for a cleanup.
Page 11

Experts disagree on what what degree of exposure to radiation constitutes an "acceptable risk"; radiation levels at major sites in the St. Louis area far exceed federal cleanup guidelines.
Page 12

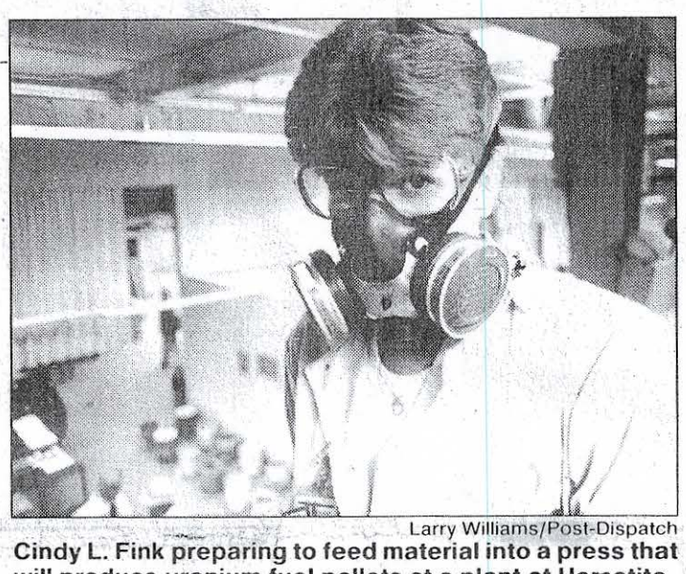
Larry Williams/Post-Dispatch

Mary Halliday of St. Charles Countians Against Hazardous Waste.

Part Six

The Post-Dispatch discovered four "forgotten sites" where radioactive material was once processed or stored in secrecy after World War II. The government had lost track of these places. There are dozens of such sites across the country.
Page 13

Hematite, in unincorporated rural Jefferson County, is home to the nation's oldest commercial uranium-fuel production plant. Radioactive waste is buried in 40 pits on the plant grounds.
Page 13



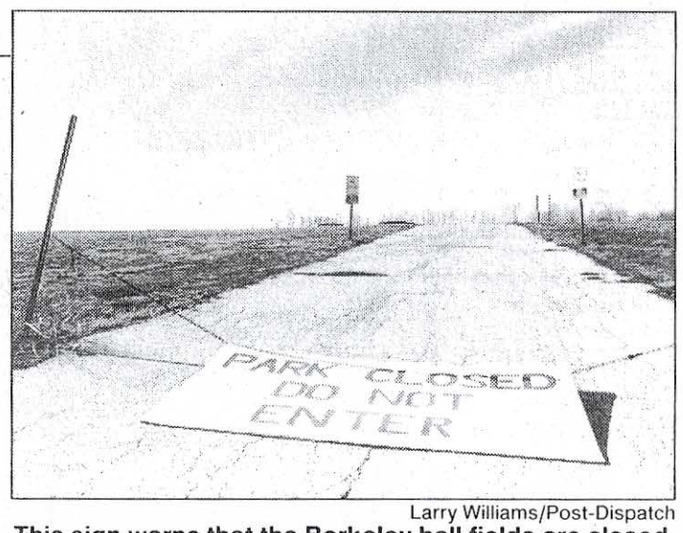
Larry Williams/Post-Dispatch

Cindy L. Fink preparing to feed material into a press that will produce uranium fuel pellets at a plant at Hematite.

Part Seven

Cleanup issues are at the forefront in the St. Louis area, 47 years after radioactive waste began building up here. Even if all the attendant political problems could be resolved, cleaning up everything could cost $1 billion.
Page 15

President George Bush on his way to a speech in the area, rides past a nuclear waste site and promises he will try to restore some federal money for the area's cleanup efforts.
Page 15



Larry Williams/Post-Dispatch

This sign warns that the Berkeley ball fields are closed.

Bower

Rose

Tighe

Williams

Borgman

How This Series Was Done

Unlocking the secrets behind radioactive waste in St. Louis took months of effort by three Post-Dispatch reporters. Starting in 1987, Carolyn Bower, Louis J. Rose and Theresa Tighe acquired and pored over thousands of government documents dating from 1942 to the present.

They interviewed more than 200 people — including former uranium workers, corporate executives, government officials, scientists, technical experts, environmental activists and persons who live near contaminated areas.

What came out of their investigation was a graphic picture of how waste was generated, how it was spread haphazardly throughout the area, the difficulty in cleaning it up and the lingering confusion over how hazardous it really is.

Bower, 35, worked for the Louisville Courier-Journal and the Gastonia (N.C.) Gazette before joining the Post-Dispatch in February 1984. She was chief of the St. Charles Bureau when she began work on this series. She now covers police in St. Louis County and two neighboring counties. She is a graduate of Smith College.

Rose, 57, an investigative reporter, joined the Post-Dispatch in 1964. He has covered state and local governments, focusing on corruption, conflicts of interest and misuse of public funds. Previously, he worked at the Providence Journal-Bulletin, the Terre Haute Star and the Turlock (Calif.) Daily Journal. He is a graduate of Bates College and has a master's degree in journalism from Northwestern University.

Tighe, 40, has worked for the Post-Dispatch since 1981. While assigned to the newspaper's bureau in St. Charles County, she became interested in radioactive contamination at the former uranium processing plant near Weldon Spring. She has written extensively on the subject. She is a graduate of the University of Missouri School of Journalism.

Others involved in the project were:

— Gerry Everding, a free-lance journalist, who has a special interest in investigating nuclear waste.

— Larry Williams, staff photographer, who shot the modern-day pictures for the series and was a consultant on the historical photos.

— Tom Borgman, graphics editor, who was responsible for graphics and layout design.

— Edward H. Kohn, assistant city editor for projects, who provided technical assistance.

The series was edited and supervised by Richard K. Weil Jr., assistant managing editor for special projects.

ST. LOUIS POST-DISPATCH

EVERYDAY

SECTION D

SUNDAY, FEBRUARY 12, 1989

A Miracle With A Price

Atomic waste is one legacy of a St. Louis firm's patriotic work

By Carolyn Bower,
Louis J. Rose
and Theresa Tighe
Of the Post-Dispatch Staff

FIRST OF A SERIES

THE Atomic Age in St. Louis began on April 17, 1942, over lunch at the Noonday Club, 319 North Fourth Street.

Chemical manufacturer Edward J. Mallinckrodt Jr. had his usual — a bowl of cold cereal. His companion, Arthur Holly Compton, the renowned physicist, did most of the eating — and the talking.

Compton was well aware of the topics of the day. Adolf Hitler's Germany was battering the Allies in Europe; Japan was on the verge of driving U.S. forces from the Philippines.

But Compton and other scientists involved in a top-secret project at the University of Chicago were distressed about something else.

They had received intelligence reports that German scientists were ahead of them — perhaps two years ahead — in developing the "ultimate weapon."

So Compton had come here on behalf of the federal government to ask his old friend to try what three other companies had deemed too dangerous. He wanted Mallinckrodt to purify uranium in large amounts for an atomic bomb. If Mallinckrodt could succeed, the United States could win the race for the bomb and win World War II.

On a handshake, Mallinckrodt began work that afternoon.

Within three months, Mallinckrodt Chemical Works was producing a ton of pure uranium daily.

It was, Compton said later, "a technological and industrial miracle."

But the miracle had its price.

As Mallinckrodt employees helped win the war, and as they proudly continued their work through the Cold War, piles of government-owned radioactive waste grew and were dispersed around the St. Louis area.

Today, more than 2.3 million cubic yards of contaminated material remain scattered across the area — in St. Louis, north St. Louis County and St. Charles County. If brought together, it would more than fill Busch Stadium.

The U.S. Department of Energy has put a $700 million price tag on cleaning up the major portion of the waste.

That estimate does not include the cleanup of other waste in the area, including some in Jefferson County and possibly some in nearby Illinois.

Most scientists and other experts think this low-level waste is hazardous to human health at least to some degree. Some say it poses a significant risk; others say the risk is minuscule.

Nonetheless, almost all experts say the waste should be cleaned up. For one thing, it will remain contaminated for billions of years.

If left spread out over the area, waste easily can be lost or forgotten. This already has happened with surprising frequency in just 47 years since the waste was first generated.

To understand the problem of radioactive waste here and to evaluate the options that lie ahead, it is necessary to understand what happened between 1942 and the present.

□

In 1942, scientists at the University of Chicago needed about 40 tons of uranium for the experiment that would prove self-sustaining nuclear reactions possible.

No more than half a cup of uranium pure enough to sustain fission existed in the country. It had been purified in ether, a volatile chemical, in a laboratory.

The need now to produce it tons at a time was what caused Compton — a former professor at Washington University here and later its chancellor — to turn to Mallinckrodt for help.

It was a smart choice. Mallinckrodt's father and uncles had started their chemical business in 1867 on the family's potato farm between North Broadway and the Mississippi River.

By 1942, all traces of Mallinckrodt's rural beginning were gone. The company had an international reputation for the purity of its chemicals. One of its specialties was producing ether for anesthesia.

After the April 17 luncheon, Edward Mallinckrodt and his team did not even bother with blueprints. Engineers and chemists sketched their ideas on scraps of paper, or chalked them on a wall or the floor.

In a day or two, carpenters and pipefitters began turning the ideas into equipment.

They needed stainless-steel kettles and they needed motors — items unavailable during the war years. Mallinckrodt had one of his plants in New Jersey dismantle a production line and ship the equipment to St. Louis.

"People worked morning, noon and night," said Harold E. Thayer, who was in charge of acquiring supplies for the project. He later became president and board chairman of Mallinckrodt.

"They worked in alleyways and corners of laboratories" trying to find ways to process the uranium safely, he said.

Mallinckrodt chemists and engineers knew they could purify uranium without an explosion if cooling took place quickly. They would mix one part of a hot liquid form of uranium with two to three times as much cold ether.

The liquid uranyl nitrate entered the mixture at 176 degrees Fahrenheit; the ether was chilled to 32 degrees Fahrenheit. Ether boils at 95 degrees.

Mixing the ether and the uranyl nitrate was like dropping water (in this case, the ether) into a hot skillet (the uranyl nitrate). The ether would bubble up; if the pressure became too great, there would be an explosion.

Mallinckrodt workers tested their theory in a small experiment in an alleyway rather than in a building. Just in case.

When there was no explosion, workers installed a 300-gallon mixing tank and seven smaller tanks in Building 52. The small tanks were used for storing water, which was pumped into the large tank to wash the mixture and remove impurities.

The men who operated the contraption called it "Snow White and the Seven Dwarfs."

Refrigeration did not exist at the plant in 1942. So the ice man delivered huge blocks of ice that sat outside the building melting into cold water, which was circulated around the tanks to keep them cool.

Leo Burkhart, one of the first men in the uranium division at Mallinckrodt, says one of his most important duties was to make sure there was always enough ice.

It was also one of the hardest. Burkhart stood 5 feet 7 and weighed 118 pounds. The ice blocks frequently weighed 80 pounds or more.

As he worked in the August heat, Burkhart knew that at any moment the highly volatile ether could explode. The week before, someone on the night shift goofed and all the windows had blown out of an adjacent building.

Otherwise, Burkhart was unaware of any health hazards connected with the job.

Mallinckrodt purified all the uranium used in the experiment on Dec. 2, 1942, that proved the atomic bomb possible. On that day in a squash court under Stagg Field at the University of Chicago, Enrico Fermi triggered the first self-sustaining nuclear reaction.

Operating in secret, the government built three cities — Oak Ridge, Tenn., Hanford, Wash., and Los Alamos, N.M. — in less than two years.

In St. Louis at Washington University, physicists would use the cyclotron to produce some of the world's first plutonium, used as a trigger for atomic bombs.

Great jumps in knowledge and technology — leaps that normally would have required years of study and testing — occurred daily throughout the country during the Manhattan Project.

□

For many at Mallinckrodt, the toughest job was keeping everything about their work a secret. FBI checks prompted neighbors to speculate about the workers' character.

Burkhart remembers how FBI agents had quizzed his neighbors on Angelica Street. They asked about his character. Did he gamble? Chase girls? Drink heavily? Was he rowdy? Did they ever hear him talk about his work?

The questions seemed ludicrous. After all, Burkhart, 24, was married and had a small child. He had been working 14 hours a day, seven days a week.

Whenever he asked his supervisor what was going on, the supervisor would put his finger to his lips and say, "Shhh."

Burkhart had heard the material he was dealing with was radioactive, but the word had little meaning. One of his co-workers speculated that if it was radioactive it must be for radios.

Richard F. Schroeder, another uranium worker, recalls that FBI agents approached him in a bowling alley.

When the agents identified themselves, Schroeder said he immediately stammered: "What did I do?"

Nothing, the FBI men assured him. They merely wanted him to keep his eyes and ears open and give them a call if he saw or heard anything suspicious.

When Mallinckrodt began purifying uranium, most workers called it by name — although only a handful could guess how it would be used.

Executives dubbed the project Uranium Oxide S.L. 42-17. They chose the name deliberately to imply that the uranium compound was merely another Mallinckrodt chemical.

But that wasn't secret enough for military police.

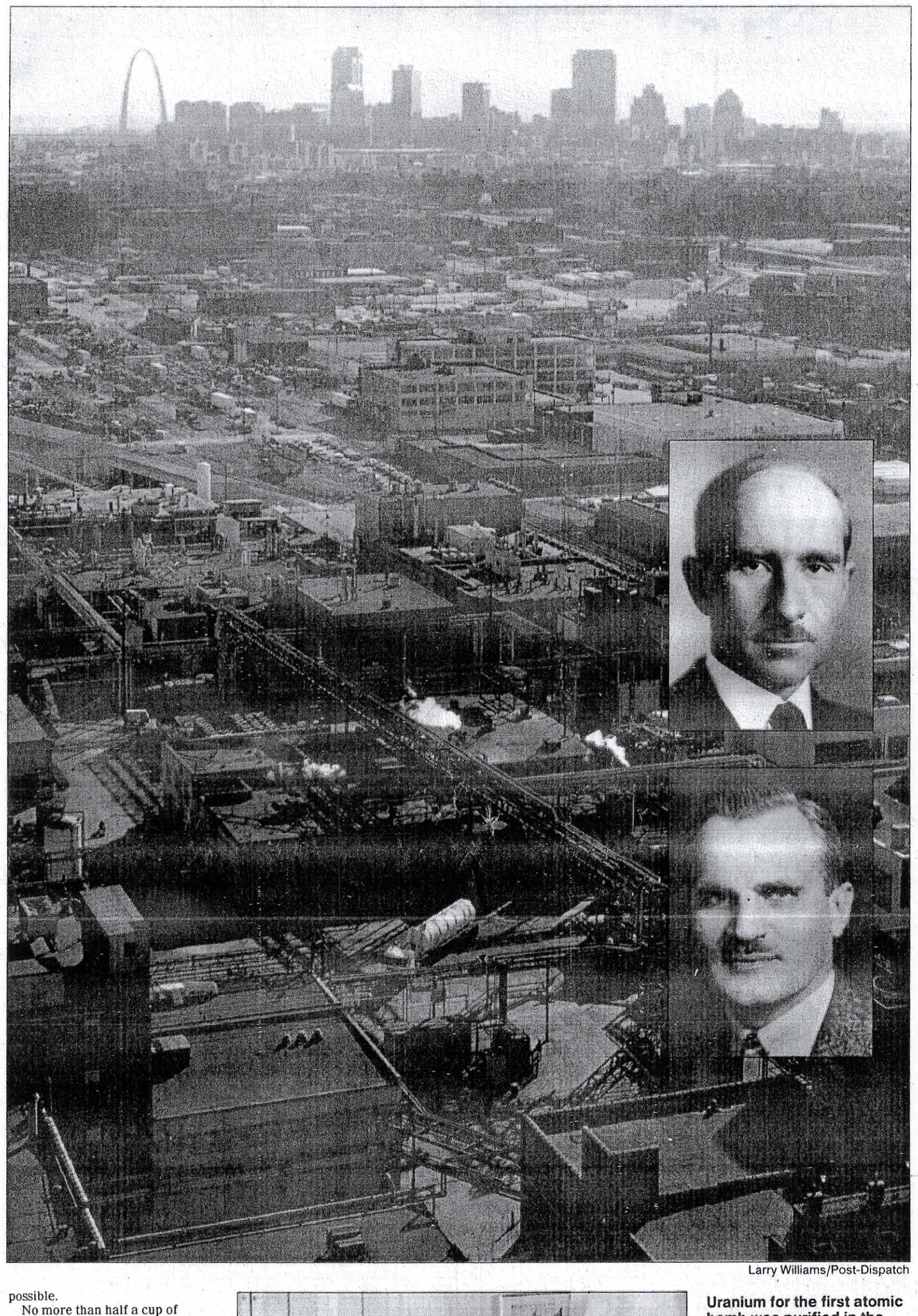
Said Thayer, the former Mallinckrodt board chairman: "We got told in words of one syllable that it was a secret. We were not to say 'uranium.' "

One worker managed to miss the company lectures on that subject, and while in a nearby saloon, he mentioned that he was working on uranium at the plant.

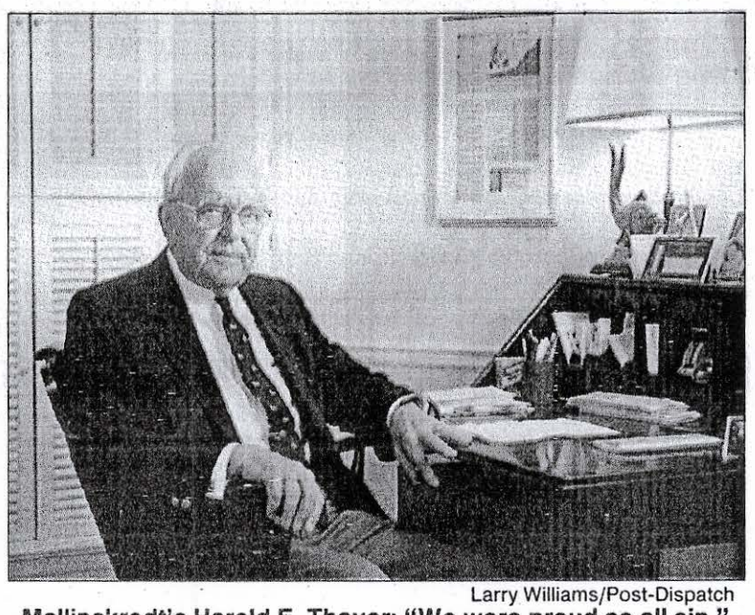
"Five hours later, they (the FBI) were all over the bar," Thayer said. "They found him in a day. And they made damn sure he didn't talk about it again."

The incident impressed

See WASTE, Page 4



Larry Williams/Post-Dispatch



Larry Williams/Post-Dispatch

Mallinckrodt's Harold E. Thayer: "We were proud as all sin."

Uranium for the first atomic bomb was purified in the pink buildings with the red roofs at left center, at what was then the Mallinckrodt Chemical Works in north St. Louis. The work was carried out under the direction of company president Edward J. Mallinckrodt Jr. (top inset) after physicist Arthur Holly Compton (lower inset) asked the company in 1942 to take it on. The roofs' color is unrelated to the uranium processing.

INSIDE

LEGACY OF THE BOMB — ST. LOUIS' NUCLEAR WASTE

Waste

From page three

everyone. The material they were processing changed overnight from uranium to Tube Alloy — after movie star Myrna Loy, some employees say.

Code names such as Biscuit, Juice, Oats, Cocoa and Vitamin were slapped on all the steps of the process. Correspondence about the project read like a breakfast menu.

Today, former uranium workers say that being kept in the dark didn't bother them. The work was exciting. They trusted their company, and they knew they were working for their country.

The workers had a lot in common. They were making good money. Mallinckrodt paid 75 cents an hour at a time when 65 cents to 70 cents was the norm. They became a family.

After work, they met for bowling and formed softball teams. They took their wives and girlfriends dancing. They went with their families on picnics.

They were young and their health was the last thing on their minds. They had no idea that — decades later — their lives and their work would become the subject of national and international health studies.

The employees always sensed the work was important. They learned just how important on Aug. 7, 1945, the day after the bombing of Hiroshima.

Newspaper and radio accounts of the bombing brought two new words — atomic and radiation — to most Americans. The words would be forever linked to death and destruction.

In 1945, the atomic bomb meant victory and an end to the war. Some military strategists estimated that an invasion of Japan would have cost a quarter-million American lives or more.

The workers were elated. Like most Americans, they had brothers and friends in the Pacific ready to storm Japanese-held beaches.

Mallinckrodt employees, such as Larry Faulkner, also knew they had done their part to win the war.

"I felt like I was doing something," Faulkner said. "My brother was taken prisoner in Germany. Two of my brothers and my nephew were decorated. My son served in Vietnam. All I can say is, 'I worked for Mallinckrodt.' "

Faulkner, who had asthma, was unable to qualify for military service. Other early uranium workers, who were either 4-F or who received deferments because of their work, voiced similar sentiments.

After the bombing, the uranium workers were given a day off — for some, only the second or third day off in as many years. Secretary of War Henry Stimson sent each worker a certificate and a silver medal the size of a nickel and bearing an "A" for atom.

The certificate was "in appreciation of effective service." It said the workers "had participated in work essential to the production of the atomic bomb."

Mallinckrodt executives put a bronze plaque alongside the entrance to Building 51, part of the first plant. It said: "In this building was refined all the uranium used in the world's first self-sustaining nuclear reaction December 2, 1942."

Mallinckrodt Chemical Works would go on for the next two decades to discover and refine ways to produce materials for the Atomic Age. The company would process thorium and mechanize processes for purifying uranium salt and metal.

With the old Atomic Energy Commission, Mallinckrodt began the first industrial hygiene and safety program in the uranium-processing industry.

The uranium division workforce grew from 24 in 1942 to 1,050 in the early 1960s, when Mallinckrodt's uranium processing at a plant at Weldon Spring was at its peak. About 3,000 area residents worked in Mallinckrodt's nuclear operations over the years.

Propelled first by World War II and then by the Cold War, speed and inventiveness would be the earmarks of all operations.

"It's almost impossible to believe now," Thayer said of his company's early accomplishments.

"It all started at a lunch. There was no contract. There was nothing but a conversation between a leading scientist and Mr. Mallinckrodt. . . .

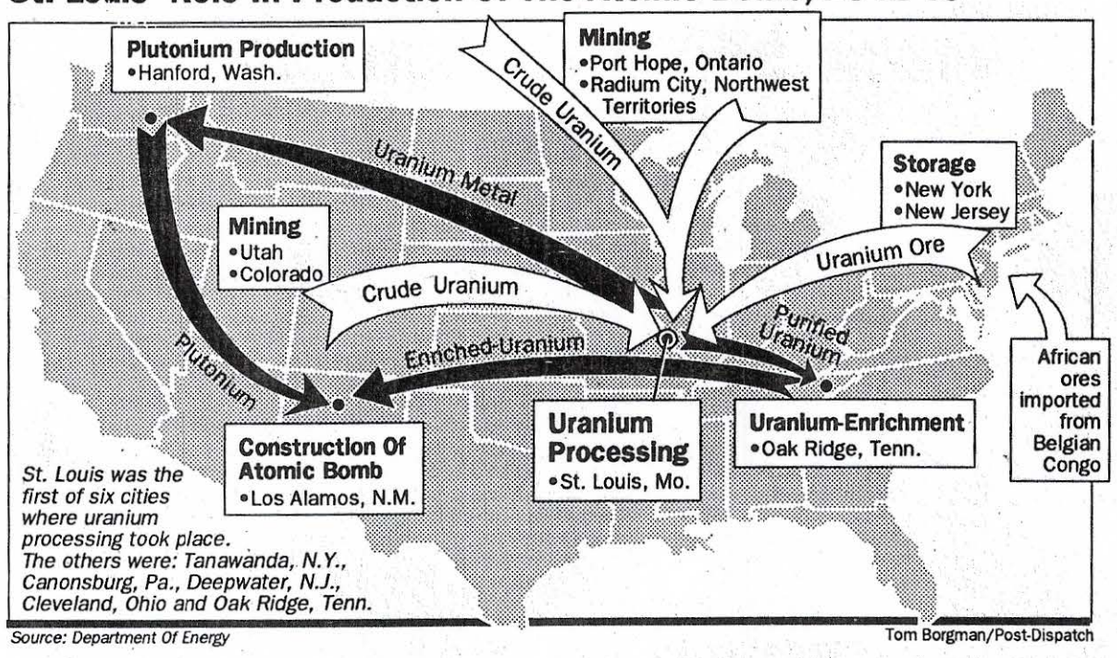
"You must understand that even though all this work was going on, no one really knew if it would work."

But it *did* work, and Thayer and others say they can never forget their role in helping unlock the power of the atom for the United States.

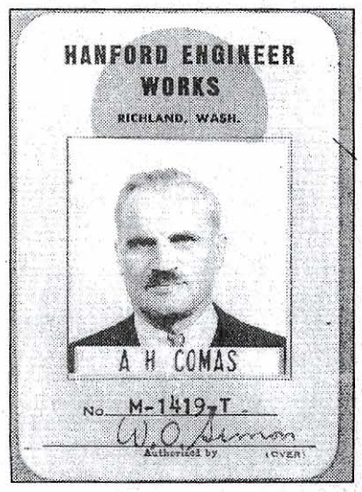
As Thayer put it, "We were proud as all sin."

Gerry Everding, a Post-Dispatch special correspondent, contributed to this story.

St. Louis' Role In Production Of The Atomic Bomb, 1942-45

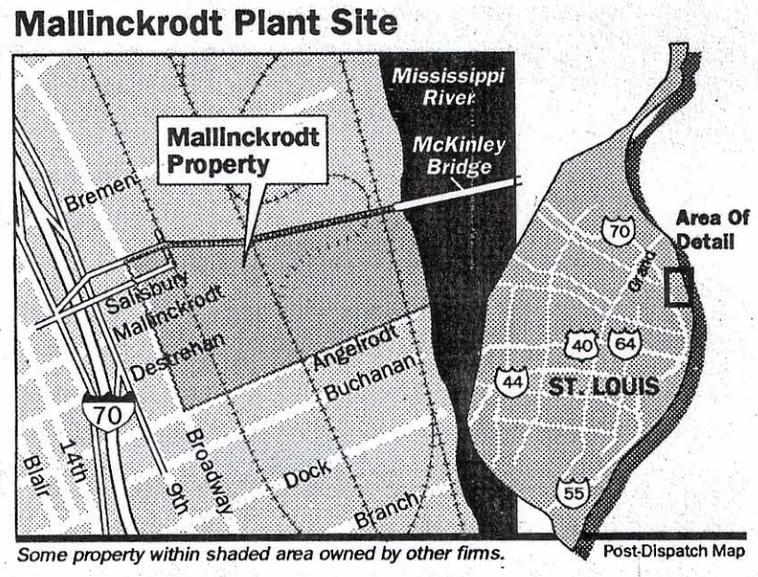


Source: Department Of Energy — Tom Borgman/Post-Dispatch



Arthur Holly Compton's 1944 identification badge, bearing the alias of A.H. Comas.

Mallinckrodt Plant Site



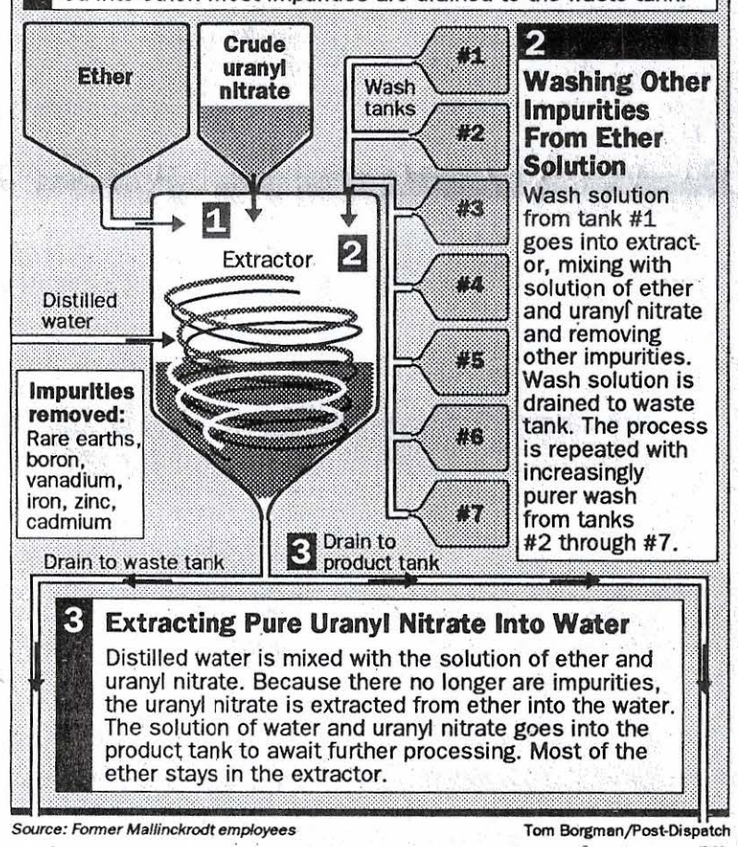
Some property within shaded area owned by other firms. — Post-Dispatch Map

Process Used In 1942 To Purify Uranium

Simplified diagram

1 Extracting Uranium Into Ether

Ether at 32°F is put into extractor. A crude yellow-crystal form of uranium (uranyl nitrate) is heated into liquid form and added at 176°F. Heat exchangers with ice water are used to keep the mixture cool. In the mixing process, the uranyl nitrate is extracted into ether. Most impurities are drained to the waste tank.



2 Washing Other Impurities From Ether Solution

Wash solution from tank #1 goes into extractor, mixing with solution of ether and uranyl nitrate and removing other impurities. Wash solution is drained to waste tank. The process is repeated with increasingly purer wash from tanks #2 through #7.

3 Extracting Pure Uranyl Nitrate Into Water

Distilled water is mixed with the solution of ether and uranyl nitrate. Because there no longer are impurities, the uranyl nitrate is extracted from ether into the water. The solution of water and uranyl nitrate goes into the product tank to await further processing. Most of the ether stays in the extractor.

Source: Former Mallinckrodt employees — Tom Borgman/Post-Dispatch

Some Definitions Of Atomic Terms

HERE ARE definitions of some terms in the story about the start of the Atomic Age in St. Louis:

Fission: Bombarding or splitting the nucleus of an atom to release a large amount of energy and heat: the principle of the atomic bomb.

Plutonium: An element produced by irradiating uranium. It is used in nuclear weapons and as a reactor fuel. It is one of the most toxic and carcinogenic substances known.

Radioactivity: A process in which some atoms become stable by expelling particles or bursts of energy. The particles are invisible, odorless, tasteless and soundless but can cause sickness and cancer.

Thorium: A radioactive element used in making gas mantles and electronic equipment and as a fuel source for nuclear reactors. During and after World War II, Mallinckrodt processed thorium for potential use in nuclear weapons.

Uranium: A radioactive element that occurs in nature. Uranium products are used in nuclear weapons and as fuel for nuclear reactors. Uranium-235, one of several main isotopes of uranium, is a highly fissionable material.

Uranyl nitrate: Toxic, explosive, unstable yellow crystals containing uranium. Early uranium workers heated it to make it liquid during the purification process.

A seven-part Post-Dispatch series

Sunday: Mallinckrodt purifies uranium to help win World War II.

Monday: Uranium workers brush aside early health warnings. Years later, health studies look at cancer rates among employees.

Tuesday: Unknown to area residents, radioactive waste is dumped in North County.

Wednesday: How the Weldon Spring plant became the area's most contaminated site.

Thursday: St. Charles County residents wage war against federal officials.

Friday: Four "forgotten sites." Waste is buried in 40 pits at Hematite in Jefferson County.

Sunday: Options for cleaning up radioactive waste in the St. Louis area.

MIKE ROYKO

When Visiting Cuba, There Is A Catch

RUSSIA points nuclear missiles at us and we point ours at them. We spy on them and they spy on us. Our subs stalk their subs and their subs stalk our subs. Despite the slight thaw in our Cold War, we're not exactly chums.

But business is business, a buck is a buck, a ruble is a ruble. So we put aside our differences and do deals.

While our missiles point and our spies peek and our subs stalk, we sell more than a billion dollars a year in products to the Soviet Union.

They may be godless commies with designs on our freedom, as any good conservative will tell you, but that doesn't mean we can't ship them farm products, chemicals, machinery, soft drinks and all sorts of material goods. We're even showing them how to build a golf course.

And they sell us about half a billion dollars in products we need or want.

The same holds true for China, with whom we fought a genuine shooting war in Korea. They might be no-good godless commies, too, but the merchandise is flowing both ways, profits are being made and their American tourist business is picking up.

So while our ideologies are in conflict and we might occasionally kill some of each other and we're constantly poised for mutual destruction, that doesn't mean we can't jingle each other's cash registers.

Except when it comes to going bass fishing in Cuba. You try that and you're in big trouble.

Some Chicago Tribune readers may have seen a recent photo in the sports section showing a fisherman proudly holding a huge bass.

What a bass it was. About 20 pounds, only a couple of pounds short of the world record.

But it's also a no-good, godless commie bass. Actually, I doubt if the fish knows much about God or communism, but it was caught in a communist lake in communist Cuba.

And that means the fisherman, to use the words of our current commander in chief, is in deep doo-doo.

The fisherman, a professional guide named Dan Snow, has been indicted for fishing in Cuba.

By going there to catch fish, and taking avid fishermen with him, he violated the law that forbids all but certain select Americans from visiting Cuba.

If convicted, he could be sentenced to 100 years in prison and fined $500,000. (That's an expensive lunker bass. It comes to five years and $25,000 a pound.)

The feds nailed Snow only recently, although he has been going fishing in Cuba since 1977, when then-President Jimmy Carter eased travel restrictions to that country.

Why does Snow fish in Cuba? Because it's a bassin' man's paradise. It has more than 800 lakes, teeming with big ol' hawgs. (This is the way a real bassin' man talks.)

They're big because bass grow larger in warm climates, where they can feed all year. And they're plentiful because Cubans are indifferent to bass fishing.

So after Carter eased the old restrictions, almost 1,000 Americans a year started going there to fish.

But in 1982, President Ronald Reagan decided this was unpatriotic. He didn't want Americans spending money in Cuba on food, lodging, rum drinks and bait, because it would help a godless, commie economy.

And he ordered that only government officials, journalists, scholars and Cuban exiles could go to Cuba. No fisherman or anyone else who would put a nickel in Castro's pocket.

However, Snow, 50, a sharp Texan, thought he spotted a loophole in Reagan's order. He said he was doing scientific research by bringing back Cuban bass to be bred with our bass, so our bass might get bigger. This, he said, made him a scholar.

But the feds figure he was just telling a fish story. They believe his main reason for going there was to make a profit by organizing fishing charters.

So the government has come down on Snow with both big feet, presumably to make an example of him and let others know that they are watching.

Although I don't condone lawbreaking, I find this case confusing.

Every year, many thousands of Americans visit the Soviet Union, some as tourists, some as businessmen. And they spend large sums to eat godless, communist borscht.

Thousands of Americans also visit China, where they spend vast sums on godless, communist egg rolls.

Thousands of others visit Yugoslavia, Czechoslovakia, Bulgaria, Poland and other commie countries, spending big money on godless, communist pierogi and other godless, communist dishes I can't pronounce or spell.

So I ask: If Americans are permitted to spend money in communist countries to eat godless, commie borscht, egg rolls and pierogi, why can't an American spend money to catch a godless, commie fish?

I don't visit communist countries, since I feel nervous anywhere you can be arrested without being able to call your lawyer and a bondsman.

But if I had to make a choice, I'd much prefer going to Cuba, with its fine beaches and bass fishing, than to Moscow, which is as cold as Chicago, without our fine saloons.

And if they are going to go after Mr. Snow, they could be less harsh. A century in prison and a $500,000 fine is kind of stiff just for doing what thousands of American businessmen, including many conservatives, do regularly — trade with communists.

Why, we don't even impose that kind of punishment on those who sold weapons to the crazy ayatollah.

The prosecutors should take another look at Mr. Snow, then throw him back. He's really not a keeper.

MARTHA CARR

Sister's Disapproval Still Bothers Her

Dear Martha Carr: I am the fourth daughter and last child in a family of six children. Everyone has always felt the need to look after me and to censure me if they didn't approve of what I did, said, etc.

I always thought that when I grew up and married, it would stop. But apparently it hasn't, and I am still suffering badly because of a letter I received three weeks ago from my oldest sister. I just don't know how to handle my own reactions.

You see, last fall my husband and I went on a cruise to Hawaii. We had a lovely time. I bought myself a bikini and modeled it in the ship's fashion show. The ship's photographer took several pictures of me, and I sent one to one of my brothers, who always put me on when I was a kid because I was pudgy.

He apparently was delighted with it and showed it to my older sister at Christmas. She was appalled. Hence, the letter. It was long and nasty. She accused me of all kinds of things and practically told me she never wanted to have anything to do with me again because I was an embarrassment to her.

Martha, I don't know what to do. Should I answer her letter? Should I ignore it? I can't even decide whether I care if I ever see her again. The whole situation is so awkward for me.

I will truly appreciate any advice you can give me.

NO NAME, PLEASE

First and foremost, you are an adult. What you chose to do is your own business, and you don't have to answer to anyone — including your sister. I'm sure she does just as she pleases (albeit maybe not in a bikini) and would resent it a great deal if you were to comment on her ideas or activities.

You do not have to acknowledge your sister's letter, but if you want to establish your independence, do it. As you write, try to keep a cool head and maintain your personal dignity. What you need to tell her — gently and firmly — is that (1) you are an adult, and (2) what you do is not subject to her approval.

And in the future, when anyone criticizes you, keep reminding yourself that you have the right to live your own life the way you want to live it. Your sister's overriding approach to you is plain rudeness, and just because she said it is not a sufficient reason for you to feel guilty or inadequate in any way.

Unfortunately, you will be "the baby" all of your life, as long as any of your brothers and sisters are alive. The best way to survive is to make a joke of the whole thing. Everyone knows you are an adult, but as they realize how old you are, they also realize how old they are, too. And that is a good time for a laugh all around.

Keep a stiff upper lip when you aren't laughing! Other people can hurt you only when you let them.

□

Family Find: I am doing my family history and need help finding a relative and her descendants.

A **Caroline Neumann** of St. Jacob, Ill., married Fred Schroder around 1886. They settled in St. Louis, where he was in the construction business. The couple had three sons — Fred, Louis and Paul.

If there is anyone within reach of your column who is a descendant of these **Schroders**, or knows of any connection to this family, I certainly would appreciate any information. Please contact

KAREN C. MATEYKA
1116 Georgia Street
Edwardsville, Ill. 62025

Rap

From page three

And the food just ain't no good
The macaroni's soggy, the peas are mushed and the chicken tastes like wood
So you try to play it off like you think you can
By saying that you're full
Then your friend says "Ma, he's just being polite, he ain't full, uh-uh, that's bull."

From that point, many memorable raps have been those that injected humor and satire into the beat. Pop stars began incorporating that approach into their songs with successful results — Blondie's "Rapture" and Queen's "Another One Bites the Dust," which both hit No. 1. Kurtis Blow performed a much-heard tribute to basketball, including such smile-prompting rhymes as "I like the slam dunks and the take me to the hoop/My favorite play is the alley oop."

Even serious comment received mainstream acceptance when the delivery had a comic spin. The Beastie Boys showed that in 1987 with their raucous Top 10 hit, "(You Gotta) Fight for Your Right (to Party)," which dealt with parental problems with brashly irreverent humor.

D.J. Jazzy Jeff and the Fresh Prince are the latest perpetrators of that strategy. "Parents Just Don't Understand" — the story of a teen who steals his parents' Porsche, picks up a 12-year-old girl and gets caught — is a statement of teen angst worthy of such pop predecessors as the Who and Dion, done with a modern twist and a bit of wit to set up its point:

I can't believe it, I just made a mistake
Well, parents are the same no matter time nor place

So to you all kids across the land
Take it from me
Parents just don't understand

"It just hit a nerve with everybody," said Detroit disc jockey Charles Johnson, a.k.a. the Electrifying Mojo, a longtime rap observer. "A lot of kids probably experienced the lyrical content of that song — and a lot of parents probably did when they were kids.

Some in the music industry are concerned that the emphasis on party rap may take an edge off the genre and the positive messages many of its acts are presenting.

"The big thing is, (Jazzy Jeff and Fresh Prince) presented that message in a way that was easy to listen to and accept."

Johnson, like others in the music industry, is concerned that the emphasis on party rap may take an edge off the genre and the positive messages many of its acts are presenting. Nelson George, Billboard's black-music editor, puts the blame for such a move on MTV and other video outlets, which have shied away from more militant acts such as Public Enemy and Ice T.

To George, the success of D.J. Jazzy Jeff and other party rappers "is more a testimony to the power of MTV than to the record being more accessible or something like that. It's not necessarily what the mass audience wants; it's what the mass audience has seen. I think there are other records and other artists who could be just as big if they got the same kind of exposure."

But even George admits that before that happens, the less commercially successful rappers may have to modify their presentations.

"They need to make more conventional videos, which they haven't done," he said.

Added disc jockey Johnson, "You have some real powerful messages that get hidden behind the image of the song, which is too bad. I'd like to see that change."

NO KIDDING

SEVEN UNFORTUNATE COMPOSERS

1. Johann Sebastian Bach — went blind
2. George Frederick Handel — went blind
3. Ludwig van Beethoven — went deaf
4. Robert Schumann — went insane
5. Hugo Wolf — went insane
6. Wolfgang Amadeus Mozart — poisoned
7. Alessandro Stradella — murdered

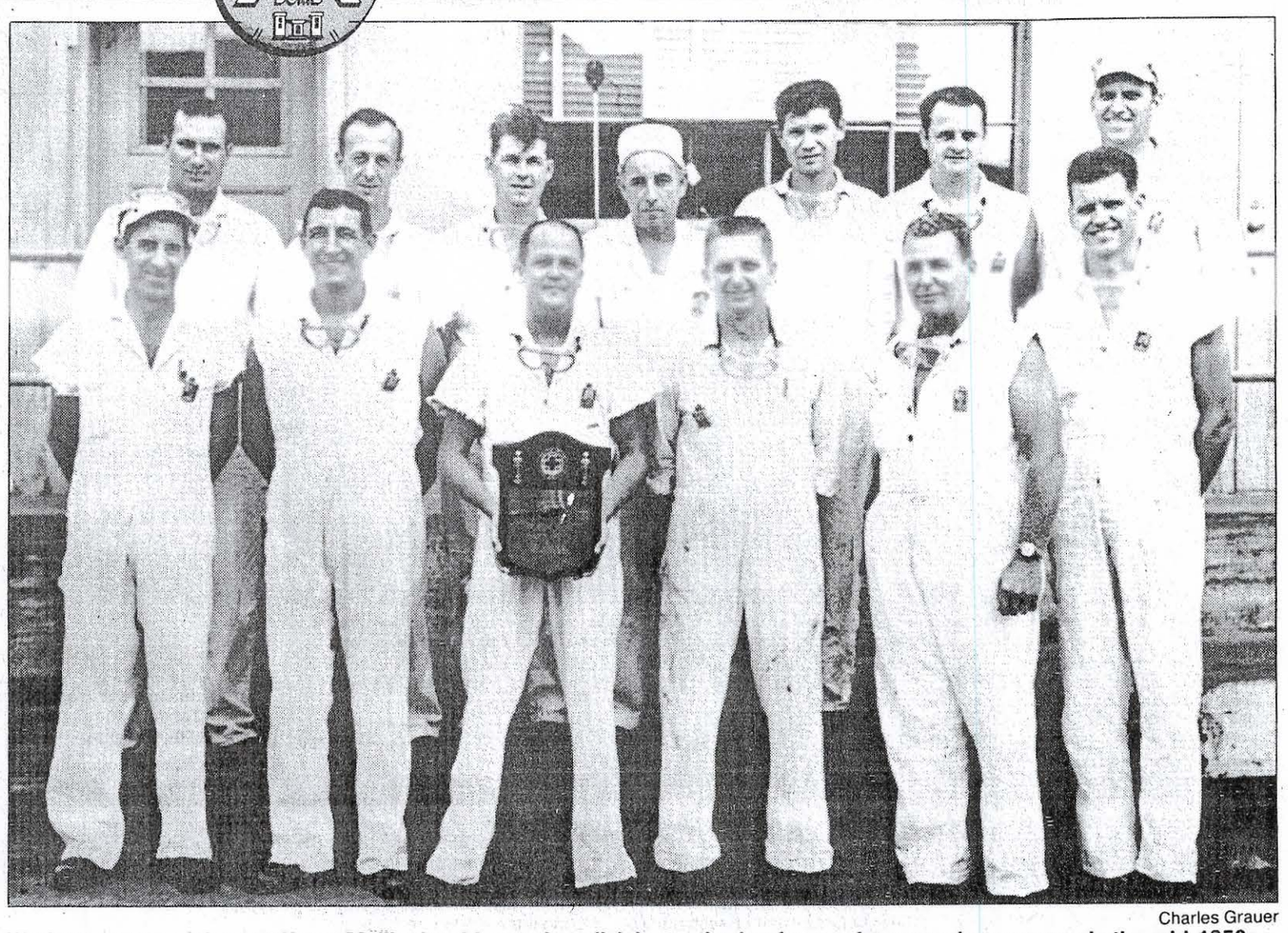
SOURCE: World Features Syndicate Research

EVERYDAY

MONDAY, FEBRUARY 13, 1989

LEGACY OF THE BOMB — ST. LOUIS' NUCLEAR WASTE

Some Feared For Health Of Ore Handlers



Charles Grauer

Workers on one of three shifts at Mallinckrodt's uranium division gathering for a safety awards ceremony in the mid-1950s.

But most workers were untroubled; no one knew what the risks might be

By Carolyn Bower, Louis J. Rose and Theresa Tighe
Of the Post-Dispatch Staff

SECOND OF A SERIES

Mont Mason taught safety.

URANIUM-PROCESSING workers on the night shift filed into the lunchroom at the Mallinckrodt Chemical Works in north St. Louis for one of Mont Mason's lectures on the safe handling of nuclear materials.

Mason, just two years out of the Marine Corps, sized up his audience. Most were in their 20s, and they were cutting up and cracking jokes like bad schoolboys.

The year was 1947. Mallinckrodt had just hired Mason to find ways to protect its employees from radiation and hazardous chemicals.

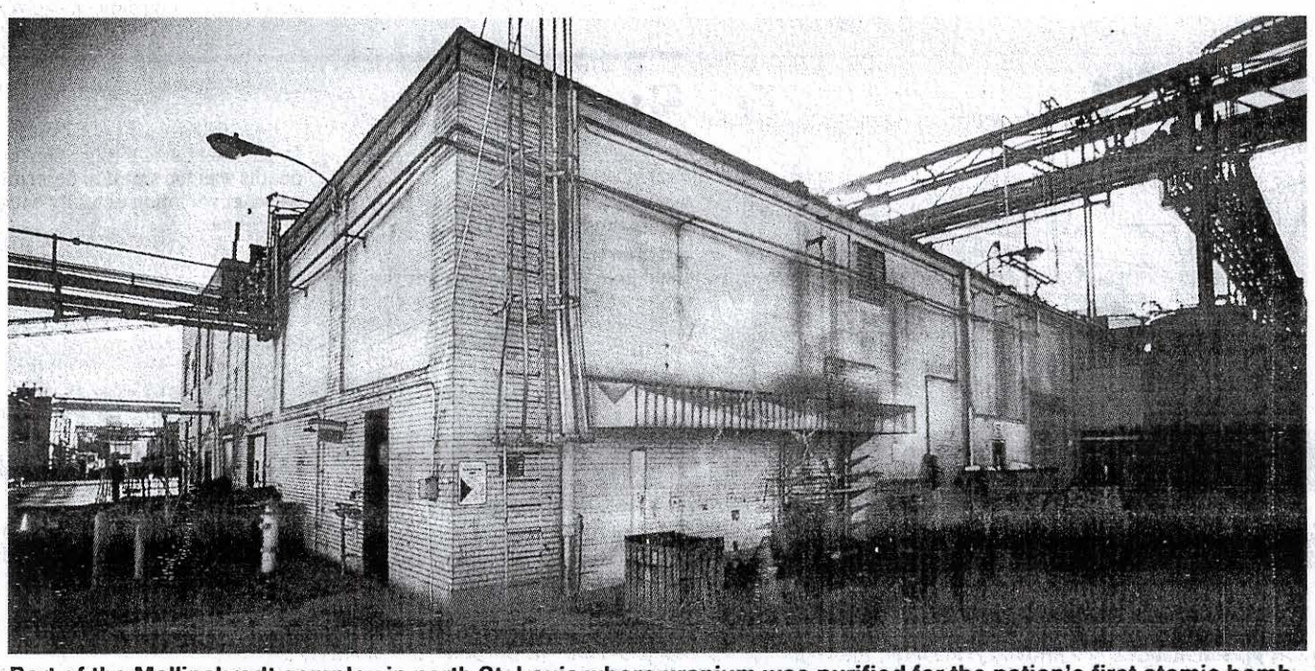
Some of the men in the room had been handling uranium since 1942, when Mallinckrodt began processing the ore for the Manhattan Project, the program that resulted in the United States' first atomic bomb. They had been told what they were doing only after the bombing of Hiroshima on Aug. 6, 1945.

Mason spent much of his time trying to convince the men that materials they had been handling could be a problem.

On this night, few of the workers seemed concerned about Mason's safety lecture. A couple of them even dozed off.

Years later, one explained: "We were young, just back from the war, and Mason and these guys were talking about protons and neutrons.

"A lot of us didn't understand what they were talking about. Half of the men slept through the lectures. They tried to tell them, but you know how people are. Some of them won't listen."



Part of the Mallinckrodt complex in north St. Louis where uranium was purified for the nation's first atomic bomb.

Some of the foremen told the men the work might make them sterile, but most workers laughed at that suggestion.

Earl Keppel, 64, the father of seven, would later joke that he thanked God that he was sterile. "No telling how many kids I'd have if I wasn't," he said.

Mason caught some men's attention in 1947 by telling them the truth. He said that although scientists did not think radiation would be a problem, no one knew for sure what the radiation they were being exposed to would do to their health.

In the 26 years Mason worked for Mallinckrodt, he earned the reputation as a straight shooter. He never stopped trying to find out whether radiation had harmed the workers.

Until his death on Aug. 16, 1988, Mason pleaded with government officials for studies of the workers' health. It infuriated him that the government had never completed definitive studies of the effects on humans of the levels of radiation allowed in the nuclear industry.

In interviews during the year before his death, Mason contended that such studies would lay to rest the fears of some Mallinckrodt workers and help to quell opposition to nuclear power. Others remain convinced that reliable research would prove that the health of early workers was jeopardized and that current exposure limits are too lenient.

□

In 1947, the workers pushed to the back of their minds any fears they may have had. The chemical company raced to meet the government's ever-growing demand for purified uranium for nuclear weapons.

In addition to processing uranium, the company experimented with thorium.

"It was a very exciting time," Mason said. "We were literally setting a (health) criteria for uranium plants of that generation. We were starting from scratch. I had to build my own instruments to measure the radiation."

From the beginning of the nuclear work in 1942, Edward J. Mallinckrodt Jr., president of the family-owned chemical company, insisted that employees wear respirators and go to Barnes Hospital for tests. Most other nuclear plants didn't take such precautions until four years later.

In 1945, Mallinckrodt employees began wearing badges to measure radiation.

Despite the company's efforts, early workers were exposed on a daily basis to levels of uranium dust that were more than 200 times the current allowable limits.

From 1942 to 1949, most uranium-processing work was done manually, and there were no limits on radiation exposure for workers.

Workers remember hand-scooping powdery uranium ore, sprinkling uranium oxide into trays, milling cakes of uranium tetrafluoride into green salt and picking beads of uranium out of waste.

In 1950, after working with the government to establish exposure limits, Mallinckrodt officials transferred 36 workers with the highest cumulative exposures out of the uranium division.

The workers were told the doses they received were not a cause for alarm, but were high enough to make it unwise for them to continue working with radioactive material.

One of the workers transferred was Arthur Tunnicliff, now 72.

Tunnicliff worked in Plant 4, a building on

See WORKERS, Page 6

Cancer Deaths Seem Higher For Workers; New Study Is Awaited

By Carolyn Bower, Louis J. Rose and Theresa Tighe
Of the Post-Dispatch Staff

FEDERAL researchers found an elevated number of deaths from three kinds of cancer in a preliminary study of 2,731 workers who processed uranium at Mallinckrodt Chemical Works in the St. Louis area from 1942 to 1966.

The study shows that, through June 1976, seven workers died of cancer of the esophagus — more than three times the 2.1 deaths expected for the number surveyed.

Researchers also found 24 percent more deaths from leukemia than normally would be expected.

Researchers also discovered an elevated mortality rate from cancer of the pancreas among workers who had received the highest doses of radiation. The study was financed by the U.S. Department of Energy.

Most Mallinckrodt workers and state health officials were unaware of the study, published in a Swedish medical journal in 1981.

The Mallinckrodt workers processed uranium and thorium for the federal government at the company's plant in north St. Louis and at a federally owned plant near Weldon Spring in St. Charles County.

The authors of the study caution against leaping to the conclusion that the men's work jeopardized their health.

They say the study did not prove that radiation caused the cancers, adding that the elevations in the death rates were small enough to be explained by chance.

Shirley Fry, who is in charge of the research being done by Oak Ridge (Tenn.) Associated Universities, said a more complete study of the Mallinckrodt workers would be ready for publication by the middle of 1990.

She said it would include data on worker deaths through 1983. The preliminary study included worker deaths only through June 1976.

The Mallinckrodt study is part of an investigation of the health of about 280,000 current and former nuclear

See STUDY, Page 6

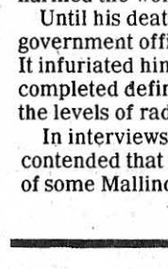
THIS DAY IN ST. LOUIS HISTORY

The 225th Anniversary of St. Louis' Founding (1764-1989)

On Feb. 13, 1764, Auguste Chouteau and the fur traders approached the site chosen for their village. Chouteau believed he was in French territory, with exclusive rights to the Indian trade granted by the French governor. However, he would later discover that France had secretly ceded the land west of the Mississippi to Spain several years earlier. . .

From The St. Louis Ambassadors
Source: Missouri Historical Society

INSIDE



Bill McClellan: Updates are called for on some people who were featured in earlier columns.

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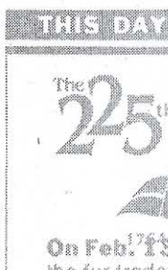


Eric Mink: Burt Reynolds has a lot of fun promoting his new TV series, "B.L. Stryker."

PAGE 7

JERRY BERGER

Dr. David Ohlms Invited To Make House Call In Moscow

ON THE WING: Dr. David L. Ohlms, medical adviser to Carpenter HealthCare Systems and medical director of Carpenter's St. Louis Program at Deaconess Hospital, has accepted an invitation to speak at the Soviet-American Conference on Alcoholism April 17-21 in Moscow. Ohlms, psychiatrist and addictionologist, said that the Soviets now acknowledge that alcoholism is the No.1 health threat in their country, and they recognize that the American identification and treatment approach is much more effective than their own.

At this first-of-its-kind conference to educate Soviet addictionologists about treatment of alcoholism, Ohlms will share the lectern with such speakers as **John Wallace**, administrator of Edgehill-Newport Treatment Center in Rhode Island, where **Kitty Dukakis** admitted herself last week for alcohol treatment.

SPINOFF: Then, there's Dr. **Fred Gaskin**, psychiatrist, addictionologist and medical director of Hyland Center, who has begun working with the impaired physicians' program of the Boards of Healing Arts in the states of Missouri, Illinois, Kansas and Ohio. Gaskin will supervise a program of treatment for physicians who are addicted to alcohol and drugs.

WEEKEND WRAPUP: Look for the longtime committeewoman of the 20th Ward, **Geneva Wright** (**Steve Roberts**' committeewoman, too), and St. Louis Circuit Clerk **Freeman Bosley Jr.** to endorse St. Louis Mayor **Vincent C. Schoemehl Jr.** for another go 'round in office. That was the word making the rounds at City Hall Saturday night at the launching of the 225th anniversary of our town's founding. The black-tie birthday party, helmed by **Karen** and **John Temporiti**, barrister with Gallop Johnson Neuman, got a lift when Schoemehl spoke and said that the 225th birthday should get the populace to focus on the past and its illustrious history. More than $10,000 was raised through the sale of tickets for the city's float entry in the V.P. Parade. Faces in the crowd included those of: **Sheldon Holzman**, the newly-dubbed managing partner of Laventhol-Horwath; former Cardinal gridder **Larry Stallings**; and **Lyda Krewson**, who is running for a 6-year term on the St. Louis School Board. . . .

Then it was on to The Sheldon, where Lohr Distributing Co., the company that supplies city retailers with Anheuser-Busch products, celebrated its 25th anniversary. The elegant dinner-party was tossed by **Ronald K.** and **Steve Lohr**, sons of the firm's late founder, **Curt Lohr**, onetime assistant to **August Busch III**, and one of our town's most beloved businessmen. (I fondly recall some fun moments spent with Lohr and his wife, **Jackie**, in the confines of Schneithorst's Kaffee Haus, where they were regulars.) "If dad were here tonight, it would be a kickoff to a sales program, instead of a celebration," chuckled Ron.

"Lohr has done a fantastic job over the years, and we're proud of the company," cheered **Jerry E. Ritter**, a vice president and group executive in charge of finance for Anheuser-Busch; he was on hand with his wife, **Peggy**. More than 175 employees, board members and friends were there to view a seven-minute movie profiling the company and its founder. The script was written by **Phil Mango**. The retirement of Lohr's general plant manager, **Brian Lartz**, occupied a special place in the program. He was presented full equity membership in Glen Echo Country Club by the Lohrs, who were accompanied by their wives, **Diana** and **Connie**.

MOREOVER: That was Circuit Attorney **George Peach** enjoying the luncheon fare at O.T. Hodge's at Union Station Friday, after which he exited for his car — parked in a no-parking zone. . . .

Carafiol's on Manchester Road is expanding by 17,000 square feet for showroom space. A Marie Collandar restaurant is also on the drawing boards there. Groundbreaking will begin in the spring, according to **Lawrence Carafiol**. . . .

Elvis, a.k.a. **Johnny Seaton** in the Muny's production of "Elvis: A Musical Celebration," did the town the other night with his sidekick, funnyman **Patrick Weathers**, a veteran Saturday Night Live'er, who appeared in numerous roles, including that of a younger Elvis in the show. The Elvis twins were spotted in the Elvis Room at Blueberry Hill, where Seaton saw his picture everywhere he looked. Seaton's resemblance to Elvis, when the King was young, lean and handsome, is uncanny. Seaton can't walk into a room without receiving stares of disbelief.

THEATRICS ON WING: It all began in the Kirkwood home of **Margaret** and **Jackson "Butch" Waterbury** the other night. That's where **Randy Alden**, a sales and operations manager for UltraWash, arrived with his friend, **Maria Giganti**, a physical therapist. A friend called from Troop C State Police headquarters on U.S. 40 and asked for help to be bailed out. It was a ruse as Giganti later learned. The foursome drove to Troop C and while on the parking lot, a Bell Jet Ranger helicopter swooped down and Alden asked Giganti to join him for a ride. They landed on a pad on the levee in front of the Gateway Arch. "I popped the question," said Alden, "and Maria accepted. I placed the ring on her finger, and then we had dinner."

LEGACY OF THE BOMB — ST. LOUIS' NUCLEAR WASTE

Workers

From page five

Broadway between Destrehan and Angelrodt streets. Workers dubbed it "The Dirty One."

The plant was closed in 1948 because the dust in the building could not be reduced to the levels safety officers considered acceptable.

Conditions were cramped in the two-story brick building, and the temperature in the furnace room reached 145 degrees in the summer. The workers say a film of dust covered everything. Sometimes, the dust even crept into the lunchroom and the showers.

On the plant's second floor, Tunnicliff and others fired uranium oxide into metal. They mixed uranium tetrafluoride, a shiny shamrock-green salt, with magnesium and packed the mixture in a metal cylinder they called a bomb.

They would put the bombs in a furnace and heat the oven to 2,560 degrees. The mixture would explode in the tube, creating the uranium metal.

Then, former workers say, the fun would begin.

"Once, twice, maybe three times a shift, sparks, fire, hot uranium metal shot through the room," Tunnicliff recalled. "We'd all dive for cover."

The hot metal escaped the container because the men hadn't yet learned to pack the mixture tight enough or to bolt the covers on securely enough, he said.

Tunnicliff became animated telling stories of his youth during an interview last year at his home in south St. Louis. But the tales disturbed Anna, his wife of 47 years.

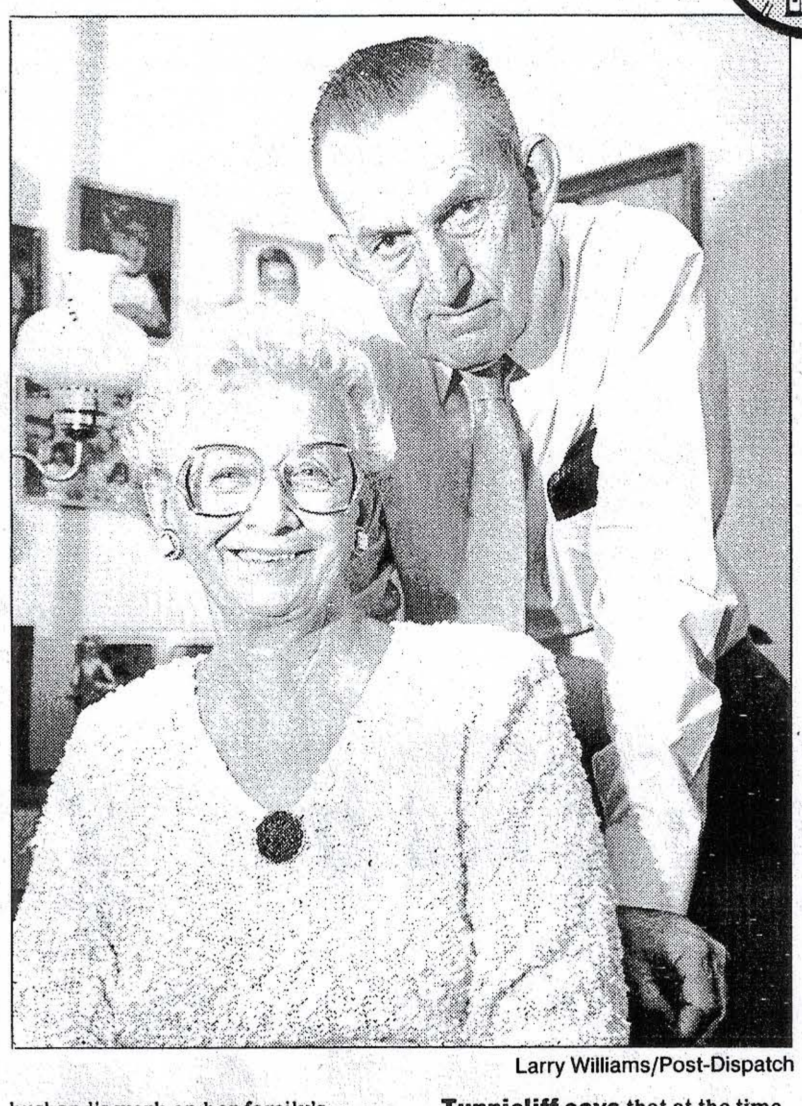
"It's a good thing I didn't know what you were doing," she said.

Anna Tunnicliff has worried for years about the effects of her husband's work on her family's health.

"I had eight miscarriages when we were young," said Anna Tunnicliff, who also had two healthy babies. "I always thought it might have something to do with the radiation."

And Arthur Tunnicliff, who doesn't like to dwell on such things, said: "Whenever a health problem comes up, I sort of wonder if my work could be the cause."

□



Larry Williams/Post-Dispatch

ABOVE: The wedding picture of Anna and Arthur Tunnicliff.
LEFT: The Tunnicliffs today. "It's a good thing I didn't know what you were doing," Anna says of her husband's work.

Tunnicliff says that at the time he was transferred out of the uranium division, health considerations were not paramount in his mind. His biggest concern was whether he would make as much money in another division.

Uranium workers regularly put in 14-hour days and seven-day weeks to meet the ever-increasing government demands for uranium products.

To meet that demand and to handle pitchblende — the hottest ore ever to be processed in the United States — Mallinckrodt built Plant 6 in 1946.

Thick brick walls shielded workers from the ore, which averaged 25 percent uranium; some was as high as 70 percent uranium. Most uranium ore contains .3 percent uranium.

The soot-black, claylike ore, originally from the Belgian Congo, came to Mallinckrodt by rail in old cattle cars and was sent with such haste that the first shipments smelled like manure.

Workers who handled pitchblende were required to shower before lunch, before going home and any time they got dusty.

From 1942, men who worked with nuclear material had been issued a full set of clothing down to their undershorts.

Federal reports show that over the years the Atomic Energy Commission spent about $300,000 for dust control and other safety measures in the Mallinckrodt complex in north St. Louis.

By 1956, to meet production quotas, all of Mallinckrodt's plants were producing more than three times their designed capacity. By 1957, it was clearly impossible to increase production without losing control over health risks.

To solve the problem, the Atomic Energy Commission in 1957 opened a new factory — operated by Mallinckrodt — at Weldon Spring, in St. Charles County.

The plant also ran at three times capacity for most of the years before it closed in 1966.

□

Former uranium-division workers still say with pride that they never missed a production quota. They note that they always provided their government with the uranium it needed for nuclear weapons and nuclear power.

Most also believe their company did its best to protect them.

"To me, it was like getting on a plane," said Carl Feisel, one of the workers. "I feel the pilot is not going to kill himself; he is on that plane, too."

Feisel began working at Mallinckrodt when he was 16, and he spent 48 years in its employ. He rose from an errand boy to a production foreman. Old Germans, as he calls them, showed him how to handle chemicals without injuring himself. He taught younger men to work safely with acids that could burn through their fingers.

Feisel, 72, who lives in north St. Louis County, does not think working with radiation posed an inordinate risk to his health.

Some other workers and their families are not so confident.

A few years ago on a slow night at the plant, a group of former uranium division employees began talking about colleagues who had died young — under 50.

In a few hours, the group had compiled a list of 40 names. More than half of the deaths, according to the group, were believed to involve leukemia or lung cancer — two cancers associated with radiation.

Dick Schroeder, 63, a resident of North County, voices the feelings of many former uranium-division workers.

"I don't regret the work," Schroeder said.

"They didn't know anything and they still don't have the true answers. I try not to worry. I just hope I wake up each day and can play golf. What's done is done. But I pray a lot."

Gerry Everding, a Post-Dispatch special correspondent, contributed to this story.

TUESDAY: Trucking the waste to North County.

Definitions Of Terms

HERE are definitions of some terms in the story about how some Mallinckrodt workers brushed aside health warnings:

Uranium: A radioactive element whose products are used in nuclear weapons and as fuel for nuclear reactors. Uranium-235, one of several uranium isotopes, is a highly fissionable material.

Uranium oxide: Highly toxic, radioactive crystals formed in uranium processing. They may be black or red to yellow. Uranium dioxides are used to pack nuclear fuel rods. Uranium trioxides are used in uranium refining and for ceramics and pigments.

Uranium tetraflouride: Toxic, radioactive, corrosive green crystals used in the manufacture of uranium metal. Also known as green salt.

Thorium: A radioactive element used in making gas mantles, electronic equipment and as a fuel source for nuclear reactors. During and after World War II, Mallinckrodt processed thorium for potential use in nuclear weapons.

15 Buildings Show Traces Of Radiation

By Carolyn Bower, Louis J. Rose and Theresa Tighe
Of the Post-Dispatch Staff

DESPITE major cleanups in the past, traces of radioactive contamination have been found in or under parts of 15 buildings at the Mallinckrodt Inc. complex in north St. Louis, federal officials say.

The contamination connected with seven of the buildings may date to the Manhattan Project during World War II, when Mallinckrodt helped the United States develop the atomic bomb.

From 1942 to 1958, the company purified uranium and thorium at its St. Louis plant for nuclear weapons under contracts with the federal government.

Andrew Avel of the U.S. Department of Energy said radiological tests showed some readings in excess of federal guidelines in, around or under parts of the 15 buildings. Avel oversees federal plans for an eventual cleanup of the complex.

Avel said the Energy Department now estimates that 127,000 cubic yards of contaminated material must be removed from the buildings and grounds. That is nearly double an earlier estimate of 70,000 cubic yards. One source estimated the cost at $46 million.

Mallinckrodt officers say the radiation levels are extremely low and pose no threat to workers or the public. They say the company has conducted its own radiological surveys and continually monitors the plant.

"I don't believe (employees) are at risk in those buildings," said Raymond F. Bentele, president and chief executive officer of Mallinckrodt Inc. "If we thought it wasn't safe, we wouldn't have people working those areas."

Avel said scientists hired by the Energy Department conducted tests last year on Mallinckrodt's buildings and grounds, as well as at some neighboring businesses. A draft report on the survey should be completed in April, he said.

The federal government financed cleanups at the Mallinckrodt complex from 1948 to 1950 and from 1957 to 1962. In the cleanups, buildings were torn down, walls scrubbed down, soil dug up and areas backfilled.

In the early 1960s, at least 5,000 truckloads of contaminated rubble from eight to 10 buildings at the Mallinckrodt complex were hauled to a quarry near Weldon Spring in St. Charles County and dumped there.

The cleanups restored the plant to levels then considered permissible by the federal government. By 1962, the government had returned the entire complex to Mallinckrodt for unrestricted use.

Fifteen years later, the government returned to check levels of radiation at the plant against tougher standards. A report issued in 1981 — based on a 1977 survey — concluded that many buildings remained contaminated.

Bentele said a radiological survey the company made in 1984 and monitoring data since then proved that employees were not at risk and had not been receiving any significant exposure.

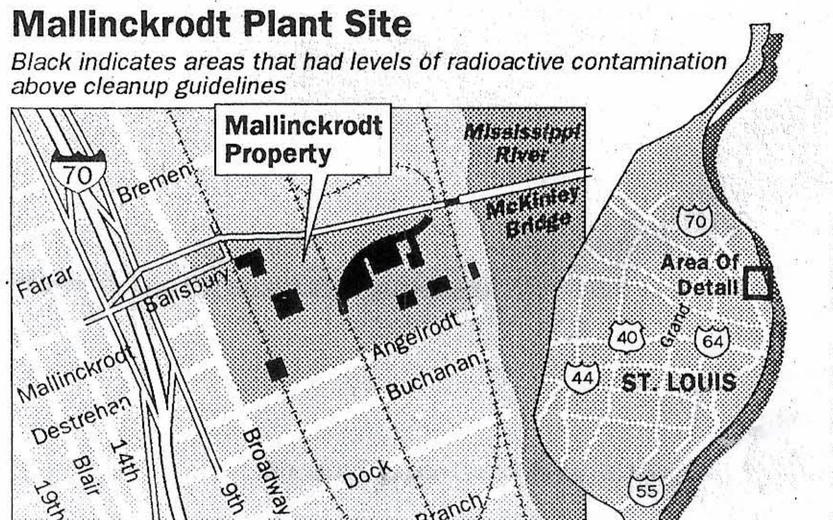
He said the company would continue to monitor radiation levels in the complex until the Department of Energy "completes final remedial action."

The 1981 report made no mention of two documents that recorded the burial under Building 101 of radioactive material in 1972 and 1973. The documents, filed with the city by Mallinckrodt, showed that Mallinckrodt buried about 233,000 pounds of ore containing 4,814 pounds of thorium.

The ore was in 30-gallon steel drums buried before the warehouse was built. They were placed in trenches and covered with at least 4 feet of dirt. Plans for the warehouse called for a 10-inch-thick concrete floor.

Mallinckrodt Plant Site

Black indicates areas that had levels of radioactive contamination above cleanup guidelines



Source: Oak Ridge National Laboratory Post-Dispatch Map

Study

From page five

workers at fuel and weapons plants across the country.

Scientists say the studies could help determine whether the health of nuclear workers has been jeopardized by exposure to low-level radiation.

Black and female employees were excluded from the Mallinckrodt study. Federal researchers said that women were too difficult to track and that there were too few black employees to produce meaningful statistics.

Although 405 workers had died before July 1, 1976, the findings in the preliminary study were based only on 390 death certificates that researchers were able to find. The cause of death for the other 15 could not be verified.

Epidemiologists say that as a result of the 1976 cutoff, some cancer deaths might have been missed. They said there often is a lag of 20 to 30 years between exposure to low-level radiation and the appearance of cancer.

Despite this, the federally financed health studies indicate that an excessive number of the nation's nuclear workers have died of respiratory diseases and cancers.

A number of individual studies show that people who worked at some uranium and plutonium processing plants in the United States have experienced higher than expected death rates from several types of cancer.

The results vary from plant to plant, with no single cause of death common to all facilities.

The studies attributed elevated numbers of deaths among nuclear workers to leukemia, Hodgkin's disease and cancers of the lung, brain, larynx, esophagus, digestive tract, rectum and prostate.

For example, elevated levels of laryngeal cancer, pneumonia and respiratory disease were found among 995 men who worked at a uranium processing plant in Buffalo, N.Y., between 1943 and 1949.

Researchers for the Energy Department said the number of deaths was too small to determine whether radiation actually caused the cancer.

They said other factors, such as tobacco or alcohol, could have contributed to some of the deaths; data on the workers' smoking and drinking habits often was unavailable.

Since World War II, government policy for exposure to radiation has been based mostly on what happened to survivors of the bombings of Hiroshima and Nagasaki and on the effects of radiation on animals.

But some scientists say low-level radiation is quite different from high-level radiation. They think the body's reaction to constant exposure to low-level doses may not be comparable to a one-time exposure to a high level of radiation.

Beyond that, they question the accuracy of some of the data from Hiroshima and Nagasaki.

The stakes riding on the outcome of the health studies are enormous.

Any evidence showing that levels of radiation below existing standards cause cancer or genetic damage could pressure the government and private industry into spending tens of billions of dollars to revamp nuclear power plants and weapons factories.

Critics of the Energy Department argue that it would be far better if the studies were done by groups independent of the agency. The department finances 80 percent of all radiation research done in this country.

The critics question the ability of the agency charged with the development of nuclear weapons to pay for unbiased research.

But Fry, who is in charge of the health studies, said: "We consider ourselves independent scientists. We don't have to answer to the government for our results. We report what we find."

A group of researchers headed by Dr. Alice Stewart of Birmingham, England, plans to conduct its own health study of the 280,000 nuclear workers included in the studies being paid for by the Department of Energy.

Stewart's group received $1.4 million to do the study as part of the settlement of a suit connected with the Three Mile Island disaster.

But, says Stewart, the Energy Department has yet to provide her with the workers' exposure records needed for the project. Her attorneys are trying to subpoena the data.

A seven-part Post-Dispatch series

Sunday: Mallinckrodt purifies uranium to help win World War II.

Today: Uranium workers brush aside early health warnings. Years later, health studies look at cancer rates among employees.

Tuesday: Unknown to area residents, radioactive waste is dumped in North County.

Wednesday: How the Weldon Spring plant became the area's most contaminated site.

Thursday: St. Charles County residents wage war against federal officials.

Friday: Four "forgotten sites." Waste is buried in 40 pits at Hematite in Jefferson County.

Sunday: Options for cleaning up radioactive waste in the St. Louis area.

MARTHA CARR

Kennel-Cough Shots Needed

Dear Martha Carr: We are going to Florida for two weeks in early [illegible]

A neighbor suggested that we should take them to the vet for shots before we go. I told her they had already had their shots, but when I got home I began to wonder if maybe they should have some other shots in addition to the rabies vaccine. Do you know?

W.V.

According to Dr. Michael Fox, the veterinarian whose column appears in this paper, you should have your dogs vaccinated against kennel cough whenever you put them into a kennel, even for a short time.

Kennel cough is frequently found in kennels, even the cleanest ones. It exists in and travels through the air, and it can even be carried by an apparently healthy dog, he says.

Check with your veterinarian for more information about and symptoms of *canine infectious tracheobronchitis.*

□

Family Find: We are looking for my fiancee's mother. My fiance, Tammy Jo Adams, and I want to invite her and her family to our wedding. Tammy has not seen her [illegible] Judy Hawkins. She is married to Alec Hawkins and is living somewhere in the St. Louis area. We have no address, and apparently the telephone number is unlisted.

We have written letters to all of the potential addresses that various people have given us, but all of them have been returned as undeliverable.

If anyone can help us find her, we would be grateful. Please get in touch with us as soon as possible, as our wedding is scheduled for April.

JEFFREY S. BAILS
585 North 7th Street
Harrisburg, Ore. 97446
Phone: (503) 995-6188

□

Dear Martha: I want to send a bouquet to a male friend of mine as a valentine. Because he spends more time awake at his office than he does at home, do you think it would be OK to send the bouquet to his office?

It's a fixed bouquet like the ones sent through the teleflorist service. It's not suggestive or anything. He's just a friend.

F.S.

Certainly. [illegible] workers are allergic to flowers, they all will probably enjoy your bouquet. Many offices could benefit from a bright touch of flowers.

Flowers are not — and should not be considered — a sexist gift. Both women and men grow and enjoy flowers; both men and women should feel comfortable both sending and receiving them.

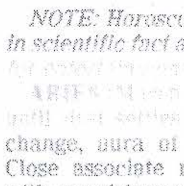
□

Dear Martha: My 19-year-old niece is in the hospital with a broken hip. I want to get her something to read, to pass the time. She really isn't a deep reader, so it should be light. Do you have any suggestions? Thanks.

W.L.

Look in the humor section of your favorite bookstore. If she isn't a deep reader, she would probably prefer short stories or humorous essays to a novel or biography. If you need help, check with one of the younger clerks. She or he should be able to help you find something your niece will enjoy.

SYDNEY OMARR



Leo: Reputation At Stake Now

NOTE: Horoscopes have no basis in scientific fact and should be read [illegible]

ARIES [illegible] change, aura of confusion exists. Close associate returns from trip with surprising news. You'll gain access to privileged information. Be analytical!

TAURUS (April 20-May 20): Attention centers around deadline, responsibility, necessity for obtaining additional funds. Relationship intensifies, older individual takes definite stand. Capricorn figures prominently.

GEMINI (May 21-June 20): Long-range prospects are clarified. Moon in your sign highlights timing, judgment, personality. Make public appearances and wear your colors: silver, bright green, yellow. Aries involved.

CANCER (June 21-July 22): What had been hidden will be revealed. You'll locate lost article. Communication received from special interest group, organization. You might be offered administrative post. Leo represented.

LEO (July 23-Aug. 22): Refuse to be cajoled into snap decision. Reputation at stake, necessity for careful observation is obvious. Circumstances will take sudden turn in [illegible]

VIRGO [illegible] sity, make inquiries, and to wardrobe. Promise concerning business or career will be fulfilled. Long-distance call results in verification, potential profit. Gemini, Sagittarius play roles.

LIBRA (Sept. 23-Oct 22): Individual who makes threats is merely "whistling in the dark." Stand tall, your point of view will be recognized. Emphasis on education, philosophy, possible journey. Scorpio involved.

SCORPIO (Oct. 23-Nov. 21): Many options exist. You are not trapped despite dire assertions by some relatives. Financial revelations will affect immediate plans. You'll "survive" with help from secret source.

SAGITTARIUS (Nov. 22-Dec. 21): Emphasize harmony, loyalty, diplomacy. Music plays role, could involve family member. Spotlight also on public relations, partnership, marriage. Changes occur at home, could include purchase.

CAPRICORN (Dec. 22-Jan. 19): Information available if you are persistent. Check source material, review budget, previous notes could [illegible]

AQUARIUS (Jan. 20-Feb. 18): Lunar, numerical cycles highlight ability to overcome distance, language barriers. Those who say you are going far afield are underestimating your capabilities. Views verified in 48 hours.

PISCES (Feb 19-March 20): Major opportunity received in role of understudy or substitute. More people become aware of your talents, potential. You'll win allies despite envy, resentment on part of some associates.

IF FEB. 13 is your birthday, you are unique, stubborn, sensual, could have been separated psychologically or actually from one or both parents at relatively early age. Taurus, Leo, Scorpio persons play important roles in your life. You are capable of tearing down for ultimate purpose of rebuilding on more suitable structure. Major domestic adjustment is part of current cycle, features possible change of residence or marital status. September and November memorable for you this year.

Rec'd 01/17/13 from member of the public

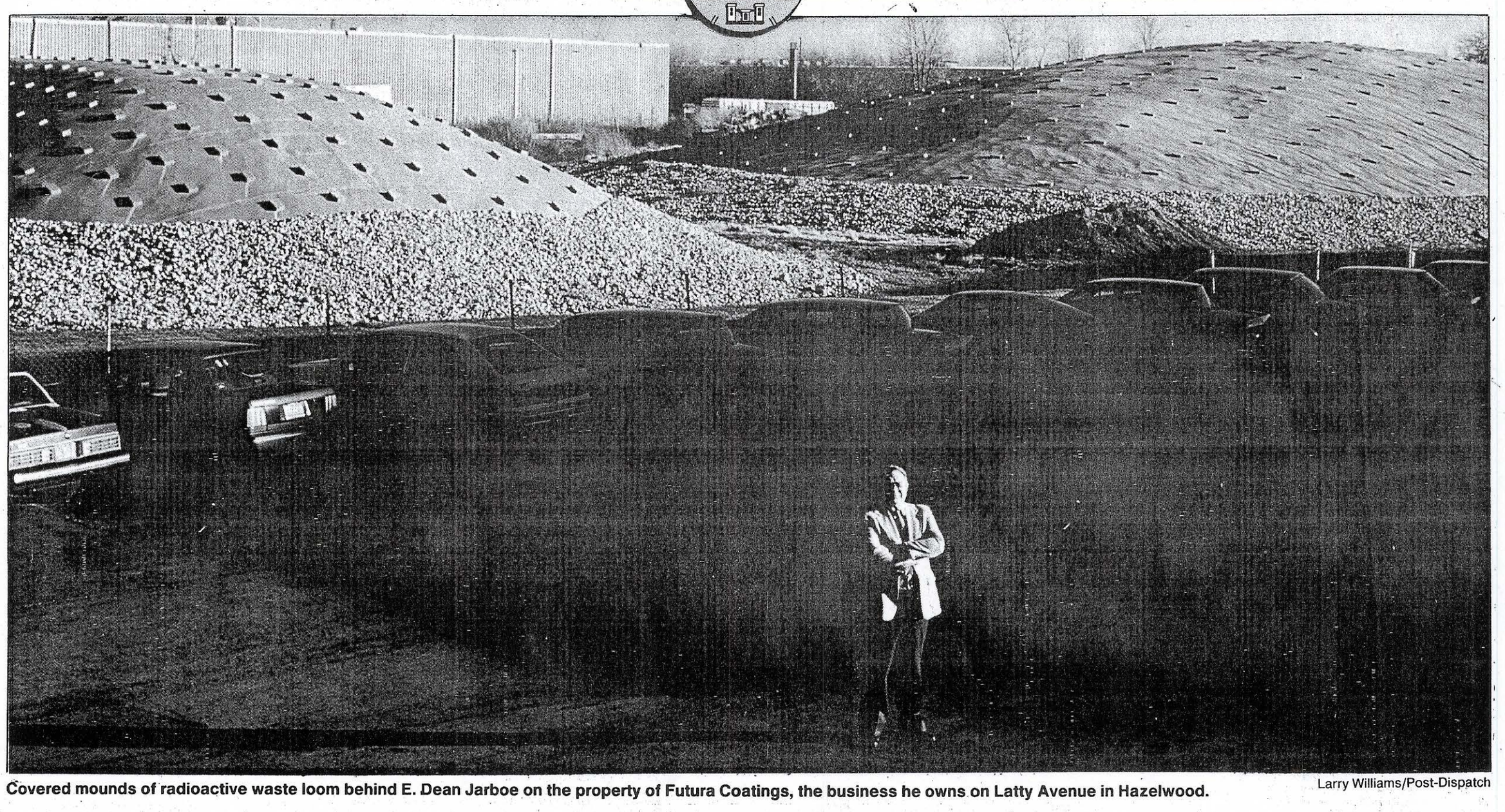
ST. LOUIS POST-DISPATCH

EVERYDAY

SECTION D

TUESDAY, FEBRUARY 14, 1989 7

LEGACY OF THE BOMB — MANHATTAN PROJECT A-BOMB — ST. LOUIS' NUCLEAR WASTE



Covered mounds of radioactive waste loom behind E. Dean Jarboe on the property of Futura Coatings, the business he owns on Latty Avenue in Hazelwood. Larry Williams/Post-Dispatch

Building A Mountain Of Radioactive Waste

Truckers were kept in the dark about what they were hauling to North County

In the summer of 1966, Leo Vasquez, 13, and his friends run out and pick up the yellow dirt that falls from trucks lumbering past his family's farmhouse north of Lambert Field.

The youngsters take the dirt and swirl it in water. They are panning for gold.

Every six minutes or so, a truck rumbles east on Frost Avenue headed for Latty Avenue from an airport waste dump. The boys are determined to get rich. Despite all their efforts, they wind up with nothing.

Unknown to the boys, they are panning waste from uranium processing that resulted in America's first atomic bomb.

By Carolyn Bower, Louis J. Rose and Theresa Tighe
Of the Post-Dispatch Staff

THIRD OF A SERIES

SHORTLY AFTER World War II ended in 1945, representatives of the federal government were looking for a place to store radioactive waste generated at Mallinckrodt Chemical Works in St. Louis. They wanted a place that was accessible, free from floods and sparsely populated.

The government settled on property north of Lambert Field, even though the western third of the land was in the flood plain of Coldwater Creek.

The landfill was top secret. Drivers hauling waste there were not told what they were transporting. For the first three months of operation, the government didn't even own the land.

When the government filed suit to acquire the 21.7-acre property, federal and Mallinckrodt officials refused "for security reasons" to disclose the exact nature of the waste.

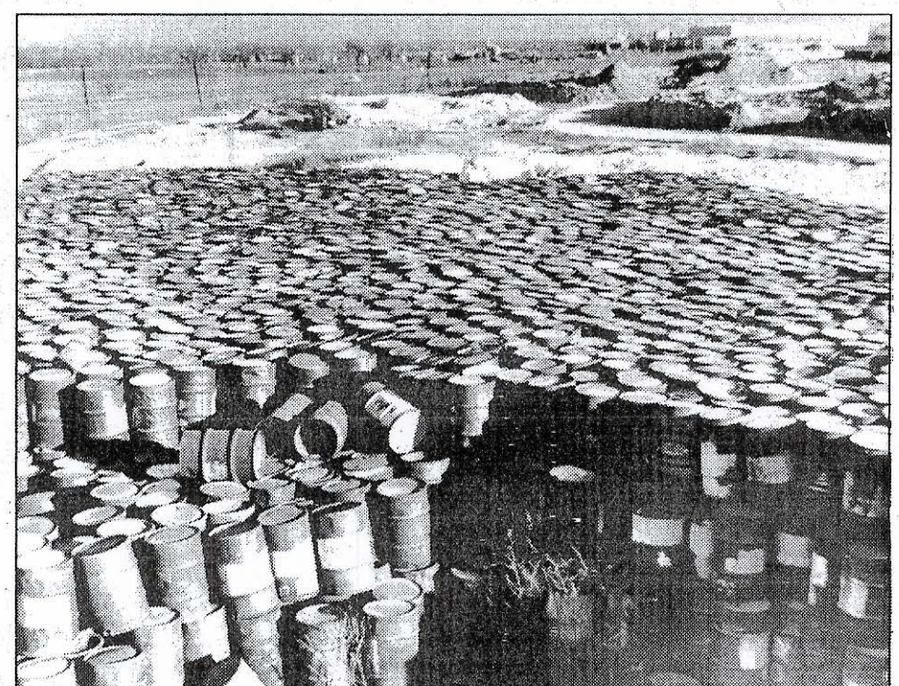
Officials said the residue was neither radioactive nor dangerous. At the time, information about nuclear operations was classified. The United States was trying to preserve its lead over the Soviet Union in the development of atomic weapons.

From the mid-1940s to the mid-'50s, Tom Green and four other independent truck drivers together hauled about 18,700 tons of uranium residue to the airport dump each year, Green later recalled.

Green and two other drivers hauled at least 5,000 tons each a year; the other two hauled much less. Each load weighed between 8 and 9 tons.

Green, a Navy veteran of World War II, worked six or seven days a week. His health and exposure to radiation were never monitored. Years passed without a vacation. His son, Mike, remembers that his father was too busy hauling the waste to come watch him play Khoury League ball.

Some of the residue Green hauled was from ore that originated in the Belgian Congo. He called it pitchblende, "the richest dirt in the world."



U.S. Department of Energy Archives

Thousands of metal drums contaminated with uranium are piled on property north of Lambert Field in this photo from the 1950s.

By the time the residue got to Green's truck, much of the uranium was gone, leaving high concentrations of radium, another highly radioactive substance.

Many times at the airport site, the pitchblende waste would stick to Green's shoes. When a worker held a Geiger counter to measure the radioactivity in Green's truck, the instrument's needle "would jump all over the place," he told his family.

In the winter when it snowed, the waste would turn into a quagmire. Green's truck would slip and slide; sometimes he had to push it from the muck.

Friends said Green never feared the radioactive material during the 12 years that he hauled it. But after he got cancer, he said the job might have cost him his life.

Green died on June 8, 1979, at the age of 63. His death certificate attributes the cause to cancer of both lungs. Green smoked cigarettes for most of his life; he stopped several years before his death.

The place where Green dumped the waste turned from a green and brown patchwork of farm fields into a moonlike world.

A huge yellow mountain, the remnants of Colorado ore, rose from flat land on its western boundary. A chocolate brown peak, the residue of ore from around the world, stood to the east.

Row after row of rusty 30-gallon and 55-gallon black drums stretched as far as the eye could see from Brown Road, now McDonnell Boulevard, to Banshee Road.

Workers from Mallinckrodt tooled around the site on bulldozers and trucks, reshaping the earth to make room for more waste, and they hand-packed radioactive residue in drums.

Richard F. Schroeder, now 63, said it was fun making mountains, moving them,

See WASTE, Page 8

THIS DAY IN ST. LOUIS HISTORY

The 225th Anniversary of St. Louis Founding
1764-1989

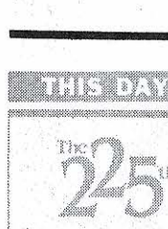
On Feb. 14, 1764, the fur-traders sent by Pierre Laclede came ashore at the foot of limestone bluffs on the Mississippi's west bank, 18 miles south of the Missouri. They planned to build their village on a ledge above the bluffs, where it would be safe from floods. At the hub of the inland river system, it was an ideal site for 18th-century fur merchants.

From The St. Louis Ambassadors
Source: Missouri Historical Society

INSIDE

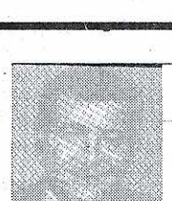
Ellen Goodman reflects on modern morality tales: Does confession lead to cure?

PAGE 3



Elaine Viets: If you've forgotten Valentine's Day, some quick fixes can spare your love life.

PAGE 3



JERRY BERGER

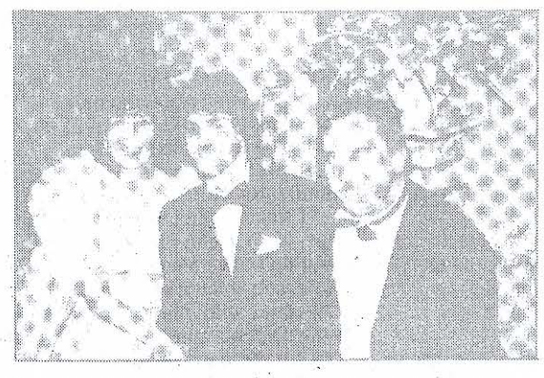
Lieberman Wins Big With Two Home Plans

ENTIRE NEWS: It's a twofer for the woeful Lieberman Corp.! Better Homes & Gardens magazine's February issue hails the developer's Carlyle townhome in the Carlyle subdivision as one of its 10 prize-winning new homes of 1989; the February Builder's magazine touts Lieberman's the Dunhill in the Dunhill subdivision in Chesterfield as winner of the "top of the line award." (By the way, the interior design for both award-winners is by **Chuck Brandt** of Jack Brandt Interiors). The bad news is that if you haven't seen either pad, don't bother to look right now. They have been locked up by the banks and subcontractors for unpaid loans and bills. . . .

While in West County, take a look at 10 houses on Old Olive Street Road, because a developer is trying to snap up all of them to make way for a commercial project. Unfortunately, there is a 90-day moratorium because of zoning that labels the area "residential." Former Creve Coeur mayor **Harold Dielmann** is putting the project together for the developer. . . .

IN THE PINK: The 15-room, circa-1904 home on swelegant Hawthorne Place owned by mechanical engineer **John Kapros** and his wife, former belly-dancer **Estella "Opa" Kapros**, was where we had a premature Valentine's Day party on Sunday night. "I'm a party girl, not a cook," said Opa when she pointed to the buffet table holding various dishes prepared by Straub's and Schnuck's.

At the head of the table was Opa's dollhouse, dominated by her favorite color — pink. "Pink is innocent and it's me," said the dancer, who once drew standing-room-only crowds at the long-gone Nico's on The Hill. There was pink everywhere in the house, originally built by a buggy manufacturer: pink furniture, pink curtains, pink wall treatment; and to top it off, Opa modeled her new pink mink ("I had it made in Las Vegas," she confided).



Estella Kapros, Robert Griffith (center) and John Kapros

Entertainment was provided by the Miller-Eaton Trio, taking time off from their home stand at Pierre's in the Adam's Mark Hotel, and Collinsville's own extraordinary piano virtuoso, **Robert Griffith**, at the baby grand, which he, along with a friend, had rebuilt.

Spied along the buffet line were Dr. **Bonard Adler** and his wife, **Phyllis**, who got beaucoup congrats on the birth of their first grandchild, Vivian, born to the Adlers' daughter and son-in-law, attorneys **Diane** and **Todd Baker**, whose pop is **DeWitt Clinton Baker III** of Manhattan. Also on hand were Raleigh, N.C., socialite **Louise McLarry** with **Byron Smyrniotius**; **Fran** and **Harlan Green**; **Debbie Hand** with **Ray Warren**; and **Tamara** and **John Stalsworth**.

MEMO TO THE MAYOR: Hey, Vince! You'd better cool it if you plan to visit the new fire department headquarters on Wednesday. (Remember the invitation you received that read: "**Neil J. Svetanics**, fire chief of the City of St. Louis, cordially invites you and your guest to attend the grand opening of the St. Louis Fire Department Headquarters building, 1241 North Jefferson at Cass, Feb. 15, 1989, at noon"?) Svetanics' office is larger than yours; he has a private bathroom, a private parking space and a plaque with his name on his door; and outside his office, there's a portrait of himself (a monument to his ego, say some firefighters). Have fun!

WHAT'S IN A NAME?: Gianna Jacobson has joined the repertorial staff of the Riverfront Times. . . .

The Missouri Concert Ballet will soon change its handle to — the St. Louis Ballet.

EXCUSE ME: On a rare night off last week for Oz general manager **Jim Greenwald**, he trekked to meet friends at Club Etc. to take in its $5-a-drink special and to chat with fellow GM **Bob Karliner**. Then it was on to Lucius Boomer's, where Greenwald and a pal were on their way to the men's room when a woman split the two in the narrow hallway near the restroom. Later, when they took a table to chow on pizza, nachos and potato skins, Greenwald was informed by a staffer that the woman he had passed was none other than rocker **Joan Jett**, in town for a gig Thursday night at the Westport Playhouse. Jett roadies and bodyguards turned down requests by Boomer's management and many patrons for photos and autographs.

Waste

From page seven

carving out mesas and roads.

"That's why I never minded going to work," Schroeder said. "Everything was so interesting."

Sometimes the workers drove their cars on top of the piles to watch the planes fly in and out of Lambert Field to the south. The mounds, perhaps 40 feet tall, were so high the workers could feel the heat from the aircraft engines.

Schroeder remembers selling drums that had contained uranium ore to merchants, who would resell them.

Bruno Bevolo tells about the day they buried the pickup truck.

"An AEC (Atomic Energy Commission) man came out and said the truck was too hot, don't use it anymore, bury it," said Bevolo, a foreman at the airport.

"We got a backhoe and dug a hole right there. They wouldn't let anybody have it. I said, 'That's too bad.' I could have used a truck."

Bevolo, now 72, said it bothered him that the trucks tracked muddy residue along McDonnell Boulevard and that when the drivers washed out the trucks, the residue overflowed into Coldwater Creek.

"I bitched like hell," Bevolo said. "I told them, 'You people are messing up the creeks.' All they kept saying was, 'Don't worry about it.' "

Bevolo and Schroeder, who often play golf together now, tried to keep the radioactive material from spreading.

Before dumping truckloads of waste in railroad cars headed for reprocessing plants in other cities, Schroeder would line the cars with wax paper and stuff rags in the holes.

Then he'd wet the dirt to keep the dust down.

"I always hoped somewhere along the route someone would wet the stuff down again," Schroeder said. He was never told where the material went.

There wasn't anything the workers could do about the wind that blew the powdery residue toward a cornfield that later became the Berkeley ballfields.

Bevolo said: "I saw them putting in those ballfields right next to the place. I said, 'That's too close.' But they said, 'Don't worry about it.' "

Last year, federal officials confirmed that the ballfields contain radioactive contamination. They have said, however, that the ballfield area poses a hazard only if someone eats the dirt.

The city of Berkeley closed the fields last April 19; they remain closed.

□

In the summer of 1966, the trucks were rolling again, this time hauling waste from the airport to an industrial park on Latty Avenue about a mile to the north.

A Los Angeles firm, Continental Mining & Milling Co., bought the material in an effort to recover valuable minerals such as copper and cobalt.

Workers for companies along Latty Avenue remember the caravan.

"The dirt would fall off the trucks," said Skip Cothran, now 59, who drove a forklift for Wagner Electric Co. at the time.

"There was waste all over Hazelwood and Latty (avenues). Sometimes if it rained, the stuff got so thick and sticky it looked like cow manure."

Velma Vasquez, mother of one of the boys who had played with the radioactive dirt, didn't think much about the dirt falling from the trucks.

"Nobody considered it as radioactive," said Vasquez, now 63.

But today her yard may be part of a cleanup. Last fall, Bechtel National Inc. completed drilling holes up to 100 feet into her property to see how far the contamination spread.

Less than a month after Continental Mining & Milling Co. moved the dirt, the company went bankrupt. Several years later, Cotter Corp., a subsidiary of Commonwealth Edison, a utility based in Chicago, bought the residue and over the years shipped most of it to its plant in Canon City, Colo.

But enough thorium, uranium and radium seeped into the ground and remained in the buildings that the property remains contaminated.

Berkeley police Maj. Louis Charboneau — then a patrolman — moonlighted about 40 hours a week between 1967 and 1971 as a private security guard at the Latty site. Security officers like Charboneau wore no badges to detect exposure to radiation.

"They told us there was no danger," Charboneau said.

Charboneau, 54, knows that scores of neighborhood children played in the sandy piles of radioactive material on Latty Avenue.

But he doesn't think the children were harmed because he thinks he has spent more time there than they did, and he thinks the radiation hasn't affected him.

Three of the children were the sons of Ceil and Jim Bogowith.

With their dogs and bows and arrows and BB guns, the boys, then ages 8 to 15, played off and on from 1966 until the early 1970s around the piles of dirt and in the creek.

Ceil Bogowith said she wasn't aware that the radioactive material at Latty Avenue could be a problem until she heard environmentalists discuss the dangers at a meeting in Florissant in 1979.

"I was quite angry," she said.

The Nuclear Regulatory Commission arranged for Kenneth Bogowith and Richard O'Brien — the two boys who had played at Latty Avenue the most — to fly to Oak Ridge, Tenn., for tests. The families were told that the boys were fine.

But federal officials cautioned that they were unable to determine whether the boys had inhaled radon. Radon gas, which has been linked to cancer, is present at the site.

Kenneth Bogowith, now 25, joined the Navy and worked on nuclear submarines. He says he has no qualms about his health. His mother says she has come to accept the situation, but she is not happy about it.

O'Brien, now 24, is not worried about his health, family members say.

□

In the meantime, in 1973, radioactive material had secretly been trucked to Bridgeton from Latty Avenue. A St. Ann company had a contract to dry the waste at Latty Avenue and send it to Cotter Corp. in Colorado.

Instead, the firm, B&K Construction Co., working with four other trucking firms, hauled 8,700 tons to West Lake landfill.

It wasn't until three years later — when an anonymous source tipped a Post-Dispatch reporter — that the unauthorized dumping came to federal attention.

After 15 years, uranium, radium and thorium have seeped through the landfill to nearby property.

Experts think there may be 170,000 cubic yards of contaminated material in the landfill now.

No one knows for sure.

Several years ago, West Lake employees called Gilbert Schroeder, a farmer from Hazelwood, and told him that people might test for radioactive contamination on land he farms west of the landfill. Schroeder has grown soybeans there for 10 years.

Government memos indicate that thorium-230 and radium-226 have been found in the field. Although the radioactive substances substantially exceed amounts normally found in soil, they are below levels at which the government requires a cleanup.

When a Post-Dispatch reporter told him about the findings, Schroeder said no one had ever called him back to tell him about the test results. He added that he wasn't particularly surprised and intended to continue farming there.

Soybeans grown in a contaminated area would have radiation levels higher than background radiation, but they would not endanger health, federal officials say.

□

In the mid-1970s, Herb Thies, who has farmed in the area for decades, was trying to grow crops at the Latty Avenue site.

His efforts failed.

"That land just wouldn't grow anything," said Thies, 58. "I put in soybeans. I planted early in the spring, and, after May and June, there was nothing to harvest.

"The outer edges worked, but the middle — it was dead dirt. It never came out right."

Thies was allowed to farm the land because the Atomic Energy Commission had declared it clean in 1974.

Two years later, the Nuclear Regulatory Commission, a successor to the AEC, said the Latty site remained contaminated. The Health and Safety Research Division of Oak Ridge National Laboratory also found excessive radioactivity.

But nobody told E. Dean Jarboe.

In 1977, Jarboe, whom associates consider a shrewd businessman, paid $115,000 for 3.5 acres of property in the 9000 block of Latty Avenue. He made it headquarters for his plastic-coatings business.

Three days after closing the deal on the property, Jarboe learned from federal officials that his property was contaminated.

"I watched one guy come in the door, and then two and then three, and I said, 'What the hell is going on?' " Jarboe, 62, recalled in an interview at his Futura Coatings office.

"About nine of them came in. We all sat down and they said, 'You can't use that property.' "

The officials told him it was contaminated with radioactive waste.

"I was shocked," continued Jarboe, 63. "I mean I had no idea. I wouldn't have bought this."

Jarboe and his sons spent the next year with other workers digging up contaminated dirt and tearing out radioactive buildings.

In 1980, he thought he had the perfect solution to the waste problem and the future of his business.

On the theory that the government would have all the waste cleaned up and shipped away from Latty Avenue in two years, Jarboe paid about $100,000 for about seven more acres of contaminated property.

Jarboe thought it was a sweet deal. The government would consolidate all the waste on the new seven-acre parcel next to his business offices. He would get $15,000 from the government to temporarily store the waste there.

Once the radioactive material was gone, his business could expand.

Nearly a decade later, he's still waiting.

Every morning as he walks into his office, he sees two mounds of radioactive waste looming beside his corporate headquarters.

Jarboe employs 85 people in his business of supplying roof coatings, wine-tank coatings and — a new venture — plastic liners for hazardous-waste disposal sites.

Sitting in his office at the site, Jarboe reflected on the problem. The government paid him $100,000 for the plastic tarps that cover the radioactive piles on his property, but that's little consolation.

"Look, I don't know what I'm going to get out of this except a clean piece of property," he said, adding: "I may not even be here when that happens.

"You can't sue the government. I tried that in the beginning. I couldn't find anything to sue them for. That's what my legal staff told me. You can't do it."

Gerry Everding, a special correspondent of the Post-Dispatch, provided information for this story.

Larry Williams/Post-Dispatch

Velma Vasquez's yard may be part of a cleanup effort.

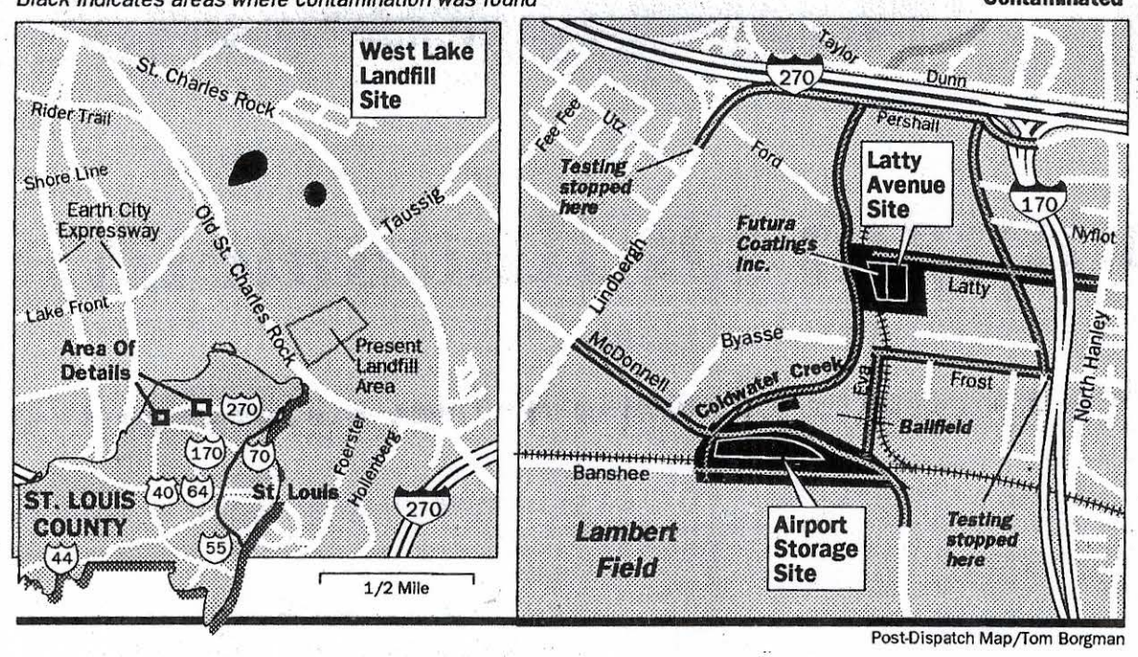
Larry Williams/Post-Dispatch

Activist Kay Drey joined the fight against nuclear waste.

North County Waste Sites

Black indicates areas where contamination was found

Contaminated



Post-Dispatch Map/Tom Borgman

Chance Sparked Crusade To Clean Up Waste Here

UNTIL a chance meeting in 1978 between a Catholic nun in St. Louis and a nuclear physicist from Cornell University, few residents even knew there was radioactive waste stored in the St. Louis area.

Sister Mary Ann McGivern was returning by plane to St. Louis from New York, where she had attended a meeting on nuclear disarmament.

McGivern found herself seated next to Robert Pohl, a physicist on his way to testify at a hearing on uranium mining on Indian lands in the West.

As they chatted over dinner, Pohl asked McGivern whether she was fighting to have the nuclear waste in the St. Louis area cleaned up.

"What waste?" she asked.

The waste on "Laddie Avenue" in south St. Louis, Pohl replied. He told her he had just read about it in a report about waste from the making of the atomic bomb.

Even with Pohl's mispronunciation of the address, it took McGivern and friends only two weeks to find the material on Latty Avenue in Hazelwood in North County.

It was time for a new crusade, and McGivern knew just the person to lead the fight.

That was Kay Drey, the tall, slender activist from University City who had been instrumental in the campaign that thwarted Union Electric Co.'s plans to build a second nuclear reactor in Callaway County.

Once briefed by McGivern, Drey threw herself at the new problem.

Her basement became a repository of documents on radioactive waste in the St. Louis area. Today, her library is the starting point for people who want to study the problem. Even officials from the U.S. Department of Energy and the Nuclear Regulatory Commission have used it.

As she learned about the history of radioactive waste in the area, Drey bombarded political leaders with letters, petitions and protests. Typically, she would spend hours drafting what she wanted to say.

In 1979, Drey recruited about 40 people in North County for a pitched battle with the Nuclear Regulatory Commission, which then had responsibility for the waste at Latty Avenue.

The fight began after the NRC made public plans to truck contaminated material from Latty Avenue and combine it with other radioactive waste at a 21.7-acre federal site north of Lambert Field. Once the Latty waste was deposited there, officials wanted to pave over part of the property and turn it into a driver-training course for local police departments.

Drey and William Crow, an official with the Nuclear Regulatory Commission, sparred frequently at municipal meetings.

Crow said the plan was a way to get the waste safely consolidated in one place.

"You get as much radiation standing next to that dirt as (you do) standing next to a human being," he said.

Drey countered: "Some communities say, 'Support your local police.' Here in St. Louis we say, 'Irradiate your local police.' "

She produced a federal report showing that radioactive waste already was leaking from the site adjacent to the airport into Coldwater Creek, which flows through residential neighborhoods in much of north St. Louis County.

Because of the uproar caused by the environmentalists, the contaminated material stayed at Latty.

Drey views it as only a partial victory. "It's one thing to stop something, but we've never been able to get them to move it away," she said.

Crow says politics, hysteria and emotionalism killed a good plan.

Atomic Surprises For Buyers?

IN HAZELWOOD, a businessman can buy warehouses without knowing they are too radioactive to use.

In Berkeley, there is nothing to prevent homeowners from selling homes and yards without disclosing that they are radioactively contaminated.

It could happen anywhere in Missouri. No state law requires the mention of radiological contaminants in any real-estate transactions or deeds.

R. Roger Pryor, an environmentalist in University City, says it is outrageous that someone could buy radioactively contaminated property without notification.

"Clearly, the information should be made available to the public," said Pryor, who is program director for the Coalition for the Environment.

Officials with the U.S. Environmental Protection Agency say the buyer of the property where radioactive waste once was dumped may be held just as responsible as past owners.

'Solution': Redrawing Maps

RADIOACTIVE material stored in the floodway of Coldwater Creek jeopardized flood insurance coverage last winter for thousands of homeowners and business owners until Hazelwood and federal officials came up with a novel solution.

They simply redrew the flood maps so the 3,700 cubic yards of contaminated dirt ended up on the other side of the line.

The dirt had been dug up during installation of a sewer line for Hazelwood and Berkeley along Latty Avenue.

With Hazelwood's permission, the contaminated dirt had been placed in the flood plain in 1986 by the U.S. Department of Energy. Coldwater Creek flows more than 13 miles through north St. Louis County, past back yards and businesses.

The dirt was supposed to remain in the flood plain only temporarily, but it stayed.

The Federal Emergency Management Agency ordered Hazelwood to remove the contamination, saying that the dirt had altered the flood plain. The agency voiced fears that the dirt might spread radioactive contamination downstream. There is a one-in-100 chance of the contaminated material being inundated by flood waters in any given year.

Officials of the agency told Hazelwood that if a solution were not found, it could lead to canceling flood insurance in that city, as well as cutting off future federal loans and grants.

In the absence of proof of flood insurance, most institutions will not make loans to homeowners or businesses in flood plains.

But Hazelwood couldn't find any other entity to accept the radioactive material.

There seemed to be no solution. Then someone suggested redrawing the flood map. Now the side of the creek containing the radioactive dirt is officially out of the floodway.

A seven-part Post-Dispatch series

Sunday: Mallinckrodt purifies uranium to help win World War II.

Monday: Uranium workers brush aside early health warnings. Years later, health studies look at cancer rates among employees.

Today: Unknown to area residents, radioactive waste is dumped in North County.

Wednesday: How the Weldon Spring plant became the area's most contaminated site.

Thursday: St. Charles County residents wage war against federal officials.

Friday: Four "forgotten sites." Waste is buried in 40 pits at Hematite in Jefferson County.

Sunday: Options for cleaning up radioactive waste in the St. Louis area.

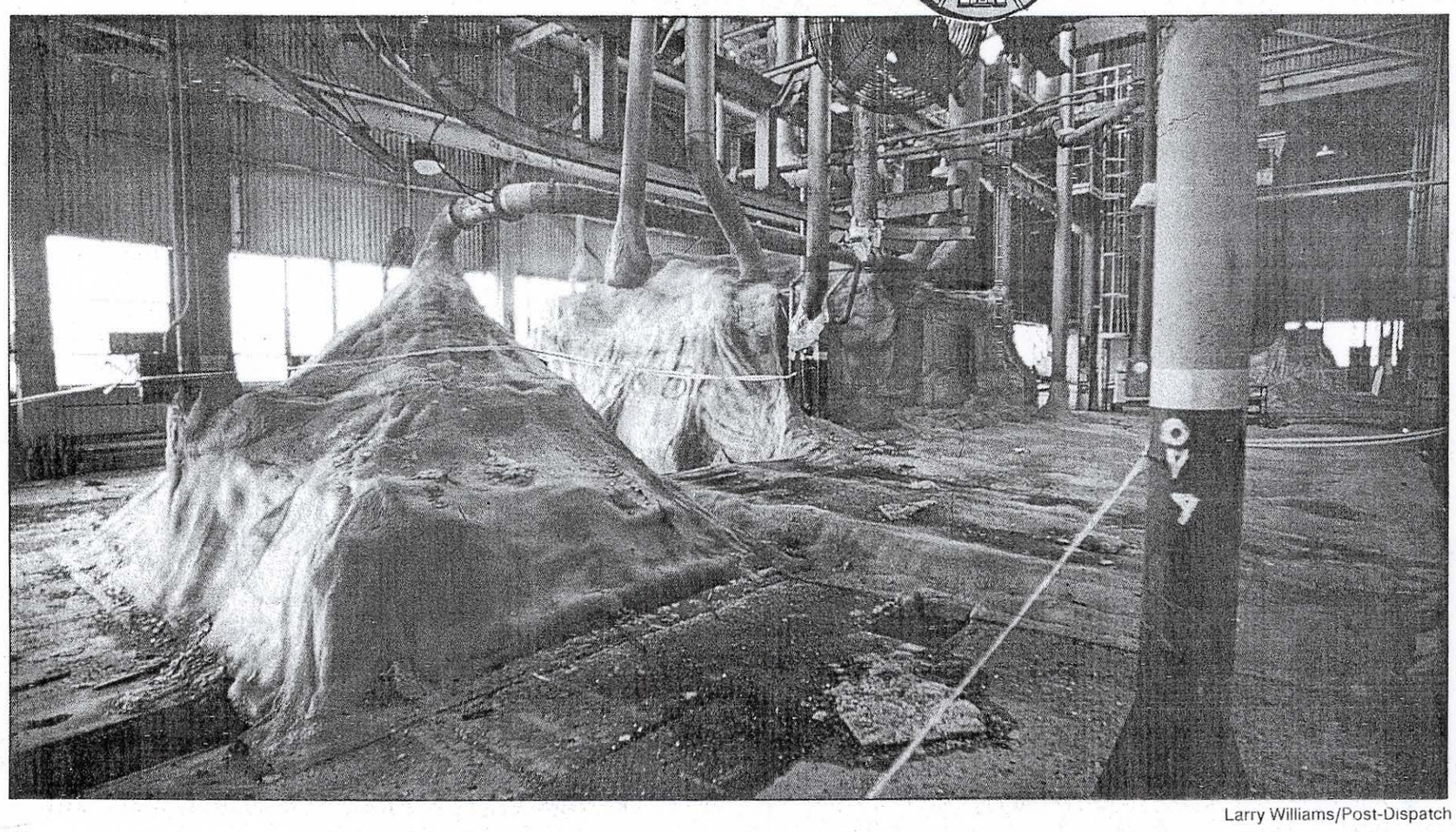
Rec'd 01/17/13 from member of the public

EVERYDAY

WEDNESDAY, FEBRUARY 15, 1989

SECTION

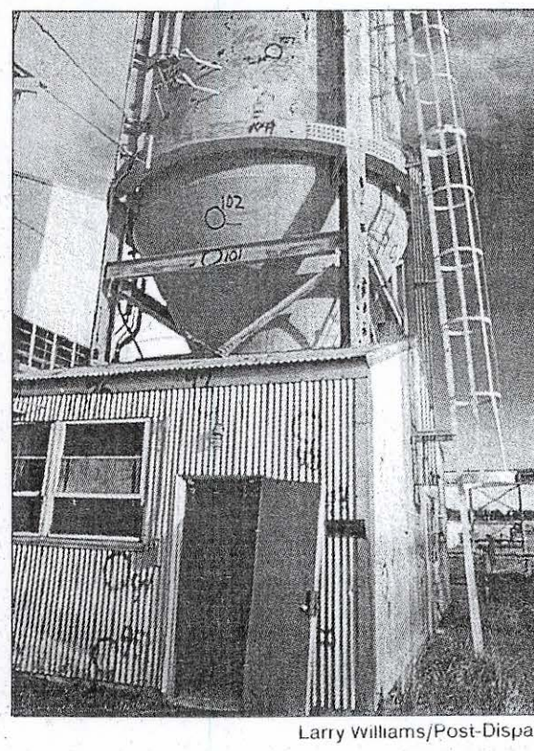
LEGACY OF THE BOMB — ST. LOUIS' NUCLEAR WASTE



Larry Williams/Post-Dispatch

LEFT: Machinery at the old uranium plant near Weldon Spring contaminated by radioactivity has been covered with plastic-like foam and labeled for inventory.

BELOW: Markings on one of the 68 building at the plant show where readings for radioac tive contamination have been taken.



Larry Williams/Post-Dispa

Contamination Of 'The Clean One'

How Weldon Spring went from model to mess

By Carolyn Bower,
Louis J. Rose
and Theresa Tighe
Of the Post-Dispatch Staff

FOURTH IN A SERIES

LIKE an abandoned set from a science-fiction movie, the Weldon Spring complex sits behind a 6-foot wire fence off Missouri Highway 94, two miles southwest of Highway 40.

Rusted steel buildings rise from farmland taken by the government for the production of high explosives in World War II. The site later was developed into a plant to process uranium for the country's nuclear arsenal.

Viewed up close, the 68 buildings are crumbling from age and neglect. Steel drums, fork lifts, trucks and other equipment lie rusting in the factory yard. The buildings, equipment, thousands of drums and tons of soil are contaminated with radium, uranium, thorium, nitrates and myriad other chemicals.

The complex is so contaminated that federal officials require visitors to check in with a guard and, for the most part, stay in federal vehicles while at the site. No one is allowed to walk in certain areas without latex rubber boots and protective clothing.

Bright yellow and purple signs warn of radioactive contamination in and around the buildings.

Several years ago, the Army sprayed thick orange polyurethene foam on some particularly hot equipment in one of the buildings to prevent the spread of contamination.

When the Atomic Energy Commission opened the plant in 1957 to process uranium, the agency proclaimed it a showplace of technology. The complex employed about 1,000 people and attracted visitors from several countries.

One-fourth of the $57 million construction cost went for measures to protect workers from radiation.

Workers called the plant "The Clean One." It eliminated many of the processes at the old Mallinckrodt buildings in St. Louis that involved handling uranium by hand.

"The new plant was all automated," said Paul P. Englert, a resident of St. Charles, who was an operator in the uranium refinery. "With a dial you could speed up production."

Hoppers, each holding between 5 and 10 tons of uranium, would dump their contents automatically into 10,000-gallon tanks containing acid as part of the new, improved process of purifying uranium.

From the start, the plant produced beyond its capacity in order to meet the government's demands. Designed to process 5,000 tons of yellow uranium ore a year, the plant actually averaged 16,000 tons a year from 1958 to 1964.

Larry Williams/Post-Dispatch

Warning signs on a door to one of the buildings at the old uranium-processing plant.

Englert and other workers remember conserving every precious gram of uranium.

If the material got too hot, the lids on large pots used in one stage of the refining process would blow off, spewing puffs of orange uranium trioxide all over. The workers would wash down the spilled powder and pump the liquid back for further processing.

Even rainwater became a source of uranium. Workers recount how they would capture rain that fell on roofs where uranium dust may have collected. The water was funneled inside the plant so the uranium could be separated out.

Radioactive residue and acids were disposed of by pumping them into several outdoor ponds at the plant, called raffinate pits. Today the ponds cover 25 acres. The mucky residue is 15 feet deep in places.

Pipes were run from the pits to a sewer line. If it rained and the pits filled, any overflow would drain southeast from the plant toward the Missouri River.

Robert J. Toomey, a retired Mallinckrodt employee, remembers when strange-looking frogs began appearing on the banks of the pits.

The frogs had bumps on them where bumps shouldn't have been, Toomey said, adding: "We didn't know if it was from the acid or what."

Many workers didn't worry about radiation.

Richard F. Schroeder, a retired Mallinckrodt worker, explained their feelings:

"It's all invisible, right? It's like standing somewhere and the wind's blowing. You can feel the wind, but you cannot feel radiation. You don't know what it's doing.

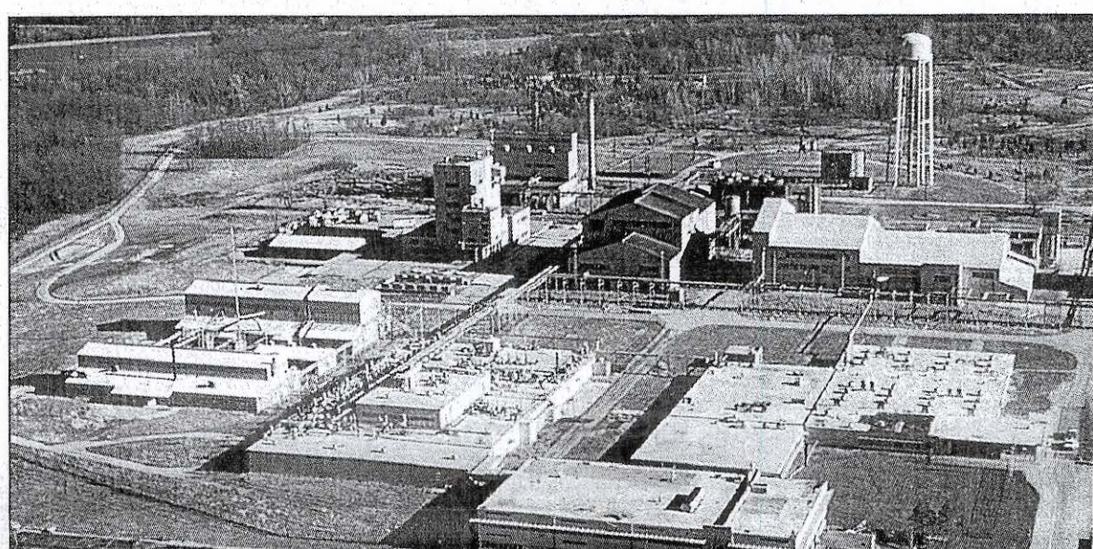
"I don't think any of us at the time worried about it," said Schroeder, now 63. "It was just another job."

Englert remembers when a conveyor belt carrying a 55-gallon drum of uranium ore got jammed. When a worker reached up to get the drum loose, it tipped, spilling its contents on him.

The worker's superiors wanted to send the man to Oak Ridge, Tenn., for tests and medical treatment, but he refused.

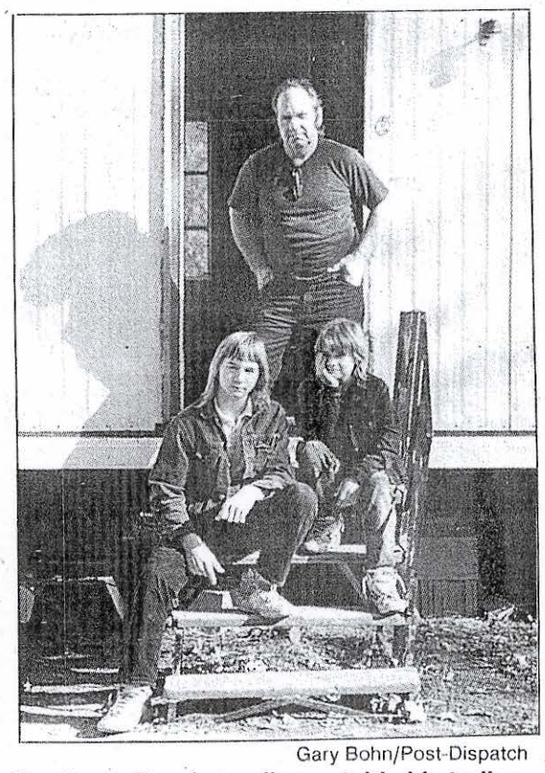
For many workers, the risks of accidents involving sulphuric, hydrofluoric and nitric acids used

See WASTE, Page 10



Larry Williams/Post-Dispa

An aerial view of the old uranium-processing plant, where a federal cleanup is under way.



Gary Bohn/Post-Dispatch

Charles A. Reed standing outside his trailer with his sons Eric (at left) and Jesse.

Worker Carries Scars Of Cleanup

By Carolyn Bower,
Louis J. Rose
and Theresa Tighe
Of the Post-Dispatch Staff

IN 1968, Charles A. Reed used a jackhammer to break down a radioactively contaminated floor a the Weldon Spring uranium processing plant. Brown chips of brick would fly upward, and yellow-green paste from beneath the bricks would soak his leather work boots and gloves.

"Some of the younger guys were careful not to let stuff get on them," said Reed, a swarthy man of Cherokee-Indian descent.

"But me, I get on a job like digging a hole . . . and I wallow in it. . . . All I think about is digging that hole."

Reed, now 52, proudly displays like war wounds th sores on his arms and legs. Frequently, he rolls up hi trousers to show his hairless shins — as bare as a baby's legs.

He traces the problems to his work 21 years ago.

In 1968, Reed worked with several hundred carpenters and laborers to remove radioactive material from three of the 68 buildings at the plant i southern St. Charles County. The plant had stopped

See REED, Page 10

THIS DAY IN ST. LOUIS HISTORY

The 225th Anniversary of St. Louis' Founding
1764-1989

On Feb. 15, 1764, the fur traders began construction of their post. After building cabins and a supply shed, they started to clear a site in anticipation of Pierre Laclede's arrival in April. Laclede would bring detailed plans for the little village of St. Louis, which over the next 50 years would grow into a city of more than 5,000 residents.

INSIDE

Bill McClellan: Virvus Jones' problems are all just a matter of degree.

PAGE 3

JERRY BERGER

Comptroller Candidate Has High-Placed Help

THAT TIME AGAIN: Coincidentally, **Peter Percich**, candidate for St. Louis comptroller, has received campaign contributions from Mr. and Mrs. **David Hoff** (he's the president of Chemetco of Hartford, Ill.), $2,000; **Thomas McRaven**, an employee of Concorde Trading Co. of Hartford, Ill., $2,000; Mr. and Mrs. **John Suarez**, the head of Concorde Trading, $2,000); and Mr. and Mrs. **Bill Faulkner** (he's also with Concorde Trading), $2,000. Concorde and Chemetco are affiliated. On the same day the checks were issued (Jan. 3), Concorde Trading contributed $2,000 to the campaign of St. Louis Mayor **Vincent C. Schoemehl Jr.**, according to sources who say Schoemehl apparently put in a good word to help Percich pay for his television campaign.

GALA: Boarding passes in the form of tickets are now available for "The A Train Gala Express," featuring the internationally renowned **Duke Ellington** Orchestra under the baton of the Duke's son **Mercer Ellington**. KMOX radio and the Clarion Hotel are co-sponsoring the benefit dinner-dance at 7 p.m. (or dancing only at 8) on March 17 to benefit the NAACP's Back-to-School/Stay-in-School project and Missouri Energycare Inc. Honorary conductors of the event are **J. Dennis Kelley, Wayman F. Smith III, Charles Mischeaux** and **Jack Buck**. The five-hour gala is being dedicated to the late Sister **Patricia Ann Kelly**, who was president of Energycare Inc., and the late **Desma Jones** of the NAACP. For reservations, call 241-7668.

J. Dennis Kelley, Wayman F. Smith III, Charles Mischeaux and Jack Buck

WITH THE LITERATI: Wasn't that "My Dinner With Andre" star **Wallace Shawn** breaking bread the other night with **William Gass, Stanley Elkin** and **Howard Nemerov** at the Art Museum in honor of author **Jamaica Kincaid**? Shawn was in town to h Kincaid, his sister-in-law, read from her collectio short stories and visit with girlfriend **Debra Eis berg**, a New Yorker magazine scribe and artist residence this semester at Washington University.

Afterward, at the Sunshine Inn, River Styx bo president **Harold Blumenfeld** toasted Kincaid a reception in her honor. Joining the festivities w Washington University architecture prof **Shel Helfman, Norma Baron, Lauren Cuoco** of KW and poet **Shirley LeFlore**.

NAME-DROPPING: All hail **Bertha Gilkey**! successful model of tenant management, Coch Tenant Management Corp., has been discove again by the nation with word that she is one of women whose portraits have been included in book "I Dream a World; Portraits of Black Wom Who've Changed America."

She was selected by Pulitzer Prize-winning aut **Brian Lanker**, whose book includes photographs biographical sketches of women who have mad significant change in this country over the last years.

Said Gilkey: "It's my understanding (Lanker) w all over the country to capture women over the 100 years who have made contributions to bl people. He said my name kept coming up no ma where he went."

LEGACY OF THE BOMB — ST. LOUIS' NUCLEAR WASTE

Waste

From page nine

at the plant caused more anxiety than the threat of radiation. Hydrofluoric acid was a special concern. Some described it as "fast-acting leprosy."

Special cards were issued to workers to alert doctors about the acids used at the plant. Employees tell how friends who got acid on their fingers at work later would wake up during the night to find their hands swollen to twice their usual size.

The late Mont Mason, a health physicist at the plant, recalled in an interview last year: "I had some people who took knives in the middle of the night and split their hands open, they hurt so bad."

By 1963, the plant started receiving enriched uranium from Oak Ridge, and workers were warned that passing the enriched material over other enriched material could set off an explosion.

The Weldon Spring plant also worked on recovering uranium from waste material shipped from Oak Ridge.

"It came on boxcars in drums," Englert said. "It looked like mud. They'd dump it in tanks. It looked like someone had cleaned up a plant and sent us the old sludge."

Empty drums that once contained uranium residue were collected near the Weldon Spring plant. Workers remember a man coming to inspect the drums. They say he took thousands of them to another site, where he had them pressed into blocks for sale to a junk dealer.

"The drums were supposed to be washed out, but you could see stuff stuck there in them," said Bruno Bevolo, a retired Mallinckrodt worker.

Late in the summer of 1966, Mallinckrodt officials took workers aside and told them that the Weldon Spring plant was going to close. The AEC contract for processing uranium was being shifted to National Lead Co. in Fernald, Ohio.

It was a bitter blow; Mallinckrodt people had designed the process and had even helped train the people at Fernald.

Workers at Weldon Spring were incensed or heartbroken. Some of the men say they cried when they heard the news.

The workers had become a family. Now some of them would be without jobs.

Company officials say Mallinckrodt got out of the uranium business because the demand for purified uranium had decreased and the government shifted production to the newer plant at Fernald.

But most of the workers insist it was "politics," arguing that Ohio's congressional delegation outmaneuvered the Missouri delegation.

The Atomic Energy Commission ordered Mallinckrodt to place the plant on standby. Mallinckrodt fulfilled its contract and ceased production by the end of 1966.

One of the last 35 men to work in the refinery at Weldon Spring was Paul Englert. "They cleaned up real good," he said. "They washed down the place and wiped it with rags and everything."

Other parts of the plant looked more like people had left in a hurry.

Some environmentalists in St. Charles County suggest an atomic accident might have closed the plant. But workers and company officials say that isn't the case, and there is no indication of an atomic accident in government records.

□

Today, the plant is a spooky place. The roofs are falling in, and clumps of mold grow on the floor and walls. But otherwise, it is as if the workers would return tomorrow.

Coffee cups sit on tables in the cafeteria. China and glasses are piled in dishwashers in the kitchen. Hundreds of unused beakers, flasks and test tubes sit in drawers and cabinets in the laboratories. Aspirin, bandages, tongue depressors, blood pressure cuffs and other medical supplies sit in the infirmary, ready for use.

For 20 years after the 1966 closing, every contractor and every government agency that entered the plant was surprised at the amount of radioactive material that remained.

In 1967 and 1968, representatives of National Lead of Ohio went to the Weldon Spring plant to see what they could salvage for the plant at Fernald.

National Lead was given its pick of contaminated stainless steel pipe, valves, vessels, spare parts and other equipment. A total of 20 rail cars and one truckload of material were shipped to Fernald.

The amount of uranium oxide found after the plant closed defied all previous expectations.

When a worker removed a ventilation pipe, uranium dust began to pour out.

He got a broom and a shovel, and he alternately swept and scooped and poured the dust into barrels.

Twenty barrels of the oxide sweepings were sent to Fernald. Eventually, National Lead recovered $75,000 worth of uranium oxide from the barrels and other steel pipes and equipment.

For several months, workers for the Daniel Hamm Co., a St. Louis subcontractor that helped to load the material for National Lead, lacked protection on the job. They had no badges to measure radiation exposure, no rubber shoes, no gloves and no respirators.

□

In 1968, during an ill-fated Weldon Spring cleanup attempt conducted by the Army, seven truckloads and 81 rail cars of contaminated material were shipped to David Witherspoon Inc. of Knoxville, Tenn.

The Witherspoon firm planned to decontaminate the equipment to conform with the standards of the day and then reuse it.

One of the laborers collecting materials for shipment to Witherspoon was Roger L. Pryor, now business manager of Laborers Local 660 in St. Charles.

"We put pipes, electric motors, stainless steel tanks in the cars," Pryor said. "They weren't clean. Some of that stuff had that yellow cake in it. All that stuff was hot. Most of it was contaminated."

During the 1968 cleanup, the government dumped 900 truckloads of radioactively contaminated material into an old quarry, four miles south of the plant.

The quarry already contained rubble from the Army's manufacture of high explosives — TNT and DNT — in the 1940s.

It also contained tons of radioactively contaminated rubble from Mallinckrodt's Destrehan Street plant in St. Louis. That material included toilets, mahogany stairs, thousands of drums of thorium and residue from the uranium processed for the first atomic reaction.

During the 1960s, teen-agers dared each other to swim in the quarry.

Over the decades, warning signs were removed from the quarry area and a chain-link fence surrounding it was torn.

People had little idea of how contaminated the Weldon Spring plant was. The federal government routinely received proposals for its use.

St. Charles County wanted to use part of the plant for a home for low-income elderly people.

The University of Missouri and Francis Howell High School each wanted the complex for classroom space. Fred T. Wilkinson, then Missouri's corrections director, wanted to put a maximum-security prison there.

The groups all lost interest when they learned the extent of the contamination.

Army Corps of Engineers security guards frequently caught curious teen-agers trespassing at the plant or stealing Army gas masks and other equipment.

In 1986, employees of the U.S. Department of Energy and its contractors arrived at the plant to start a 12-year, $400 million cleanup. Even they were surprised at the condition of the plant.

About 100 pounds of pure uranium metal were found scattered around the plant grounds and 1 ton of thorium was found in an abandoned building.

An estimated 214 tons of uranium and 129 tons of thorium remained in the pits.

Water bubbled up from broken water lines at the rate of 200,000 gallons a day. It carried uranium, thorium and radium into the August A. Busch Memorial Wildlife Area.

The leaks have since been fixed. But during heavy rain, contaminants still flow off the site into the streams and lakes of the Army Reserve and the Busch and Weldon Spring wildlife areas. The U.S. Geologic Survey has found that contamination from the pits has leaked at least 100 feet into the ground water.

In addition to all the radiological waste, there were large volumes of chemical wastes and acids.

Rodney Nelson, manager of the cleanup, said that the greatest surprise for his team was the discovery of carcinogenic nitrates from the processing of TNT and DNT during World War II.

Said Nelson of the cleanup, now expected to extend past the year 2000, "We never expected it to be this complex."

Gerry Everding, a Post-Dispatch special correspondent, contributed information for this story.

A seven-part Post-Dispatch series
Sunday: Mallinckrodt purifies uranium to help win World War II.
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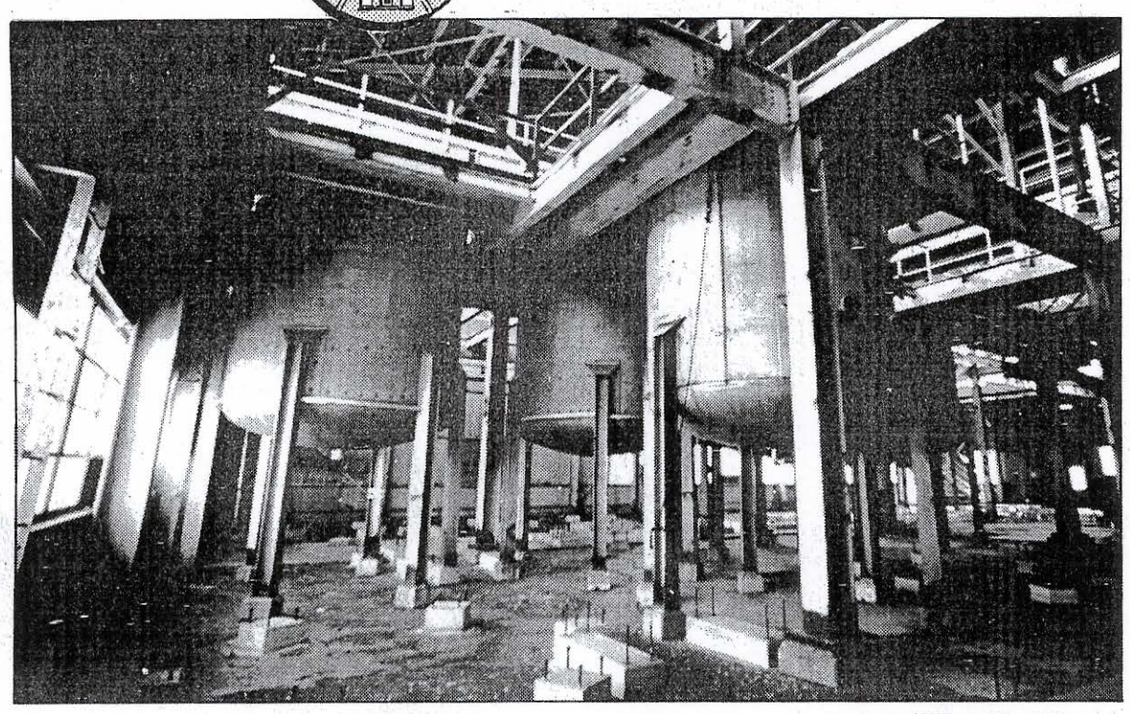
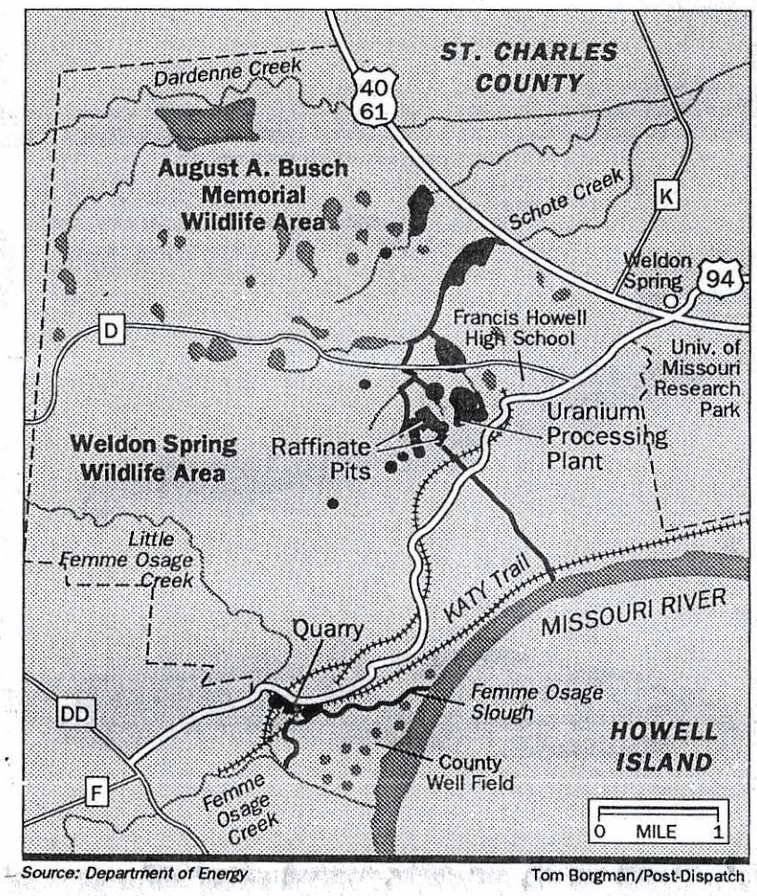


Larry Williams/Post-Dispatch

Tanks inside one of the uranium-processing plant buildings that were installed for the planned manufacture of Agent Orange. Those plans were scrapped because of radioactivity.

Radioactive Contamination At Weldon Spring Site

Black areas indicate where contamination was found



Source: Department of Energy — Tom Borgman/Post-Dispatch

Reed

From page nine

processing uranium in 1966.

The Vietnam conflict was heating up. To combat the North Vietnamese guerrillas, the Army wanted to use the plant to produce Agent Orange, a highly toxic herbicide used to defoliate the Vietnam jungle.

After spending $2.8 million and collecting 6 tons of uranium oxide in 1968, the Army abandoned its efforts to clean the three buildings. By then, the Army realized it would cost more than $30 million to reduce the radiation to levels in which people could work.

The cleanup was a total failure; some say luckily so. If it had succeeded, federal officials today might have had dioxin, a contaminant in Agent Orange, to add to the list of poisons at Weldon Spring.

As he worked in 1968, Reed occasionally would rest with his stomach on the hammer and holler to a man with a Geiger counter to take a reading.

"The closer the man would get, the more that counter would rattle," said Reed, who was 32 at the time.

Reed is convinced that working on the 1968 cleanup caused his skin cancer and shooting pains and numbness in his feet and legs. Those problems, he says, make it impossible for him to earn his living as a laborer.

Reed is divorced and lives in a trailer in rural Warren County with his sons, Eric, 15, and Jesse, 12. They live on about $500 a month Reed gets from a laborers-union disability pension.

A physician who examined Reed, Dr. Vincent Palermo, said there was no doubt that radiation damaged Reed's feet and legs. But Palermo, a former pathologist at St. John's Mercy Medical Center in Creve Coeur, and other doctors say it would be difficult to prove that radiation caused the pain and numbness that Reed says prevent him from working.

Each summer for the last few years, Reed has picketed on certain days along Highway 94 outside the Weldon Spring plant. His large sign protests the conditions under which he worked and urges protection for any future workers brought into the plant.

Definition Of Terms

Agent Orange: A military code name for a chemical defoliant mixture that contains the toxic substance dioxin. Agent Orange was used in the Vietnam War. The name derives from the color used on its containers.

DNT: The compound, known as dinitrotoluene, is associated with the production of the explosive TNT. The substance 2,6 DNT causes cancer in laboratory animals. The U.S. Army produced TNT near Weldon Spring during World War II.

Nitrates: A salt of poisonous nitric acid, associated with the production of DNT and TNT.

Radium: A radioactive, highly toxic solid used in cancer treatments, in industrial radiography and as a source of neutrons and radon.

Raffinate: Residue. The remains after extraction or refining of uranium.

Thorium: A radioactive element. Thorium is used in making gas mantles, electronic equipment and as a fuel source for nuclear reactors. Mallinckrodt processed it for possible use in nuclear weapons.

TNT: The compound, known as trinitrotoluene, is an explosive. TNT was produced near Weldon Spring in World War II.

Uranium: A radioactive element. Uranium purified by Mallinckrodt Chemical Works Co. was used in the first atomic bomb. Uranium products are used in nuclear weapons and as fuel for nuclear reactors. Uranium-235 is a highly fissionable material.

PERSONAL FORUM

PEER PANEL

Life In France: Different Rules For Teen-agers

Dear Peer Panel: My family moved to St. Louis County two years ago from Paris. My father works for the French government and is on assignment in the St. Louis area.

I would like to take exception to the recent letter you published concerning student smoking habits. I attend a large high school and yes, I do smoke, and so do my sisters, who are 15, 16 and 17. I was 14 when I started smoking. My parents did not force us to smoke, but they also do not object. Most girls start smoking at a very young age in France. It is part of the culture. Many girls consider it chic.

There are two other things that are part of life to French teen-agers — sex and drinking. I had sex before coming to the United States, and so did my 17-year-old sister. French children start sex education in fourth grade. By the time teen-agers enter high school in France, they know more about sex than most Americans do when they leave college. Teen-agers in France would never think of having sex without using birth control, the pill or a diaphragm for girls and a condom for boys. I started taking the pill when I was 14.

Birth control is readily available to all French teen-agers. There were machines in the boys' and girls' bathrooms where I started high school that sold condoms for 20 cents each in American money. Venereal disease is unheard of among French youth, and there is seldom a need for an abortion. I myself would never think of having sex with a boy who refused to use a condom. I was shocked at how little the students in my junior class knew about sex and birth control when I started school here in St. Louis. Teachers are forbidden to talk about it in my school. Until parents in America change their attitude toward sex education, there will be continued unwanted pregnancies and the need for abortions.

There is another part of the French culture you will probably disagree with, and that relates to drinking. In my family we all have a large glass of wine with our dinner each evening. Children start drinking wine at a very early age in France. Clean drinking water is not always available in all parts of France, even in these so-called modern times. Wine, therefore, takes the place of water in many homes in France. My sisters and I only drink at home, never when we go out on a date or if we are driving.

The one thing I hope we all agree on is that we also feel drugs are bad news for teen-agers, wherever they are from.

MARILYN

"Merci" for your truly interesting letter. Of course, we realize you can't generalize: Not every French teen-ager thinks and acts just the same. But it's fun to talk about our two different cultures.

Still, we have to believe that no matter what country you're from: SMOKING IS TERRIBLE for your health.

But *oui*, we agree with you on a number of points — that drugs are bad in any language, and drinking and driving is always *stupide*.

By the way, it seems to us you've come to the right American city! Have you learned about Rene Auguste Chouteau and Pierre Laclede Liguest and St. Louis' French heritage?

□

On another subject, readers, it's a wonderful week for people in love, *oui*? Candy, flowers, Valentines and true feelings. . . .We hope your Valentine's Day was terrific!

For those of you who don't have someone special right now, remember that you still are a special person. You're loved by your friends, your family and others — and we care, too.

□

If you have a problem or comment, write us: The Peer Panel, St. Louis Post-Dispatch, 900 North Tucker Boulevard, St. Louis, Mo. 63101.

LIVING WITH A DISABILITY

DIANNE PIASTRO

Dealing With Needs Of Hearing-Impaired

Q. Recently a friend was lamenting the fact that she no longer attends theater performances because of a hearing loss. She pointed out that provisions for other types of handicaps are made by theaters, but none for the hearing-impaired. That seems unfair to me. Is anything being done about this problem?

A. Things are being done but, for various reasons, political and social advocacy has come slowly for the hearing-impaired. People with partial hearing loss have trouble admitting they have a problem, and this may be the reason for their delayed identification with the disability civil-rights movement. Like most disabilities, hearing impairment is foolishly associated with shame and falsely equated with mental or physical incompetence. Unlike many disabilities, the ability to hear is invisible and people think they can deny its loss. Sadly, this denial results in withdrawal and isolation instead of learning what can be done, finding out how others cope, working through the stages of acceptance and getting on with life.

Until recently, public accommodation for persons with hearing loss was limited to providing sign-language interpreters — although most hard-of-hearing people don't sign — and installing flashing alarms for persons unable to hear auditory warnings. But we are beginning to end the silence. In 1986, uniform federal standards were adopted requiring installation of Assistive Listening Systems (ALS) in new and remodeled federally funded buildings. An ALS provides special headphones or other amplification equipment in public facilities.

The primary objective of advocates for the hearing-impaired is to increase public awareness and to make communities accessible by promoting the installation of ALS.

Also, more closed-captioned programs are now available on television, and special equipment is available to improve telephone communication.

The AT&T Special Needs Center, (800) 233-1222 voice (V) or (800) 833-3232 telecommunications device for the deaf (TDD), has a free product catalog; equipment can be bought or leased. The Tele-Consumer Hotline, (800) 332-1124 (V/TDD), is a free consumer and information service that focuses on helping people with special requirements, such as hearing loss, meet their telephone needs. It provides shoppers' guides describing different equipment available, as well as costs and known retailers, special needs fact sheets on matters unique to hearing impairments, TDD relay center comparison charts and TDD directory listings by area served.

The National Captioning Institute, (800) 533-WORD, provides information on where you can buy closed-caption decoders that are compatible with all TV sets, VCRs, cable systems and satellite receivers.

Self Help for Hard of Hearing People (SHHH) is a national advocacy organization that helps its members (ages 6 to 98) understand how to manage hearing loss. Local chapters may also provide referrals.

Contact SHHH about a chapter in your area at (301) 657-2248 (V) or 657-2249 (TDD), 7800 Wisconsin Avenue, Bethesda, Md. 20814.

DORIS WILD HELMERING

Check Out Value To Your Employer

YOU probably like to think of yourself as an asset to your employer and a considerate employee. But do you live up to this image of yourself? Take the following test to determine whether you are an asset or a liability at your company.

1. Do you get reports done on time, make phone calls when you say you will, prepare for meetings you are scheduled to attend and respond when your co-workers need information from you?

2. Do you clean your own coffee cup and dishes, put your share of money in the coffee and flower fund, and refrain from lighting up when you know other people dislike smoke?

3. Do you avoid using company time to make personal telephone calls and refrain from taking company supplies for your private use?

4. Do you resist sharing hurtful gossip about the boss or other employees?

5. Do you check to see whether another person has time to talk with you before rushing headlong into what you want to discuss?

6. At the end of the day, do you turn off the lights and the computer and put supplies and office manuals back where they belong?

7. Do you try to plan when you will take a special day off so that it will be at a time when you will not be needed?

8. Do you freely give others credit for a job well done?

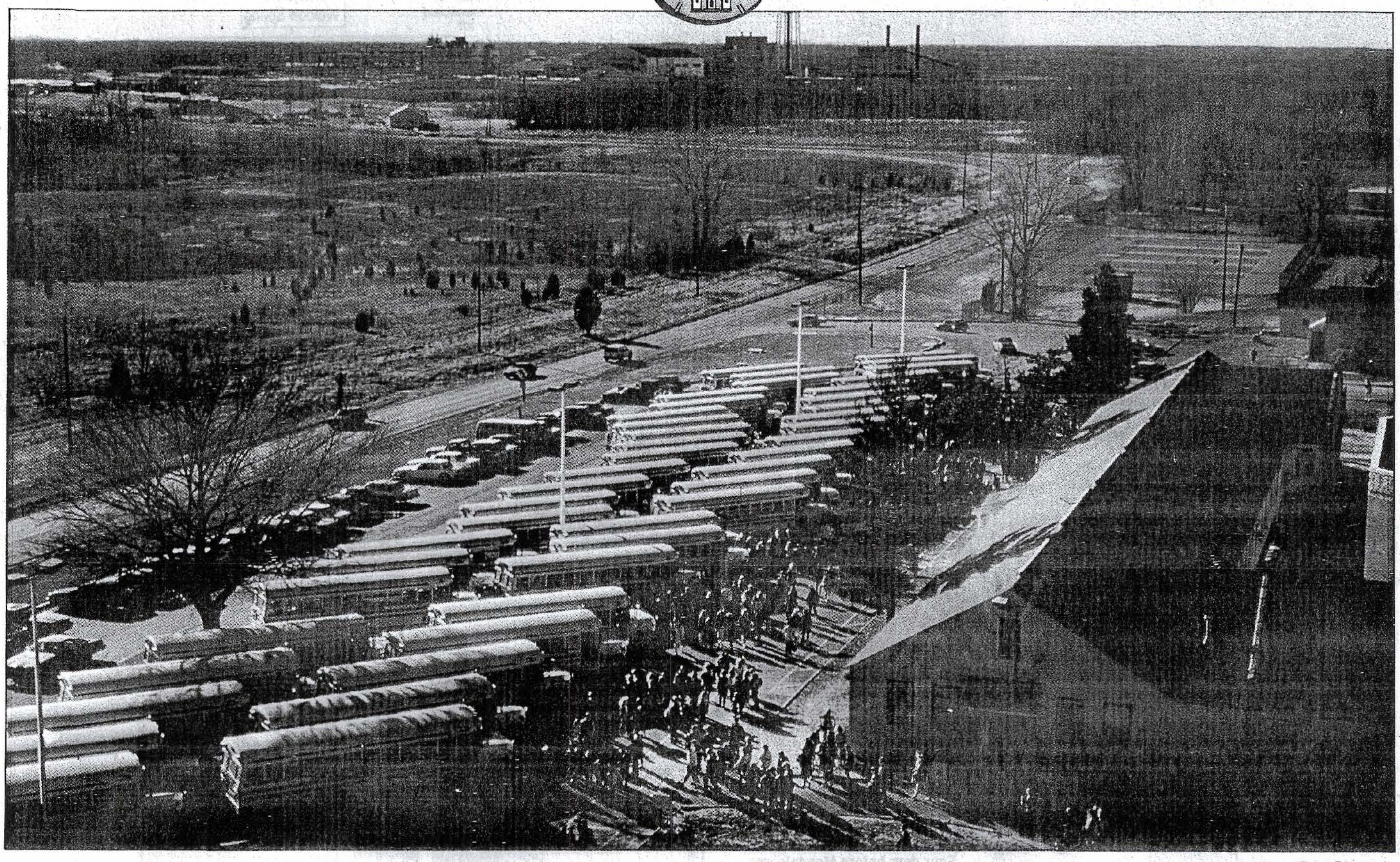
9. Do you participate during meetings, coming up with ideas and responding to the ideas of others?

10. Do you think through how your actions affect others as well as the company?

If you have answered all 10 questions with a yes, you are definitely an asset to your company and a considerate employee.

Rec'd 01/17/13 from member of the public

LEGACY OF THE BOMB — MANHATTAN PROJECT A BOMB — ST. LOUIS' NUCLEAR WASTE



Larry Williams/Post-Dispatch

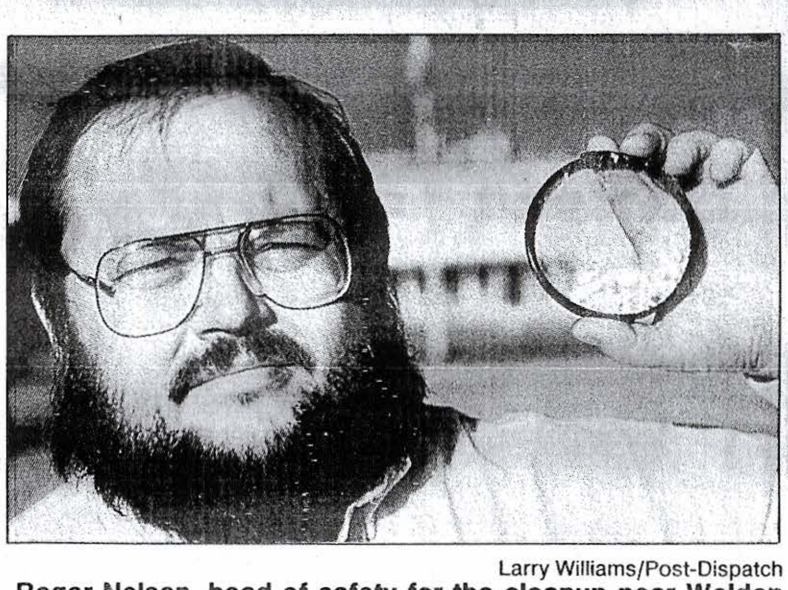
Francis Howell High School is a half-mile away from the old uranium plant near Weldon Spring. The plant is marked by the water tower.

Parents Fight Health Threat

Cleanup of plant brings questions but few answers

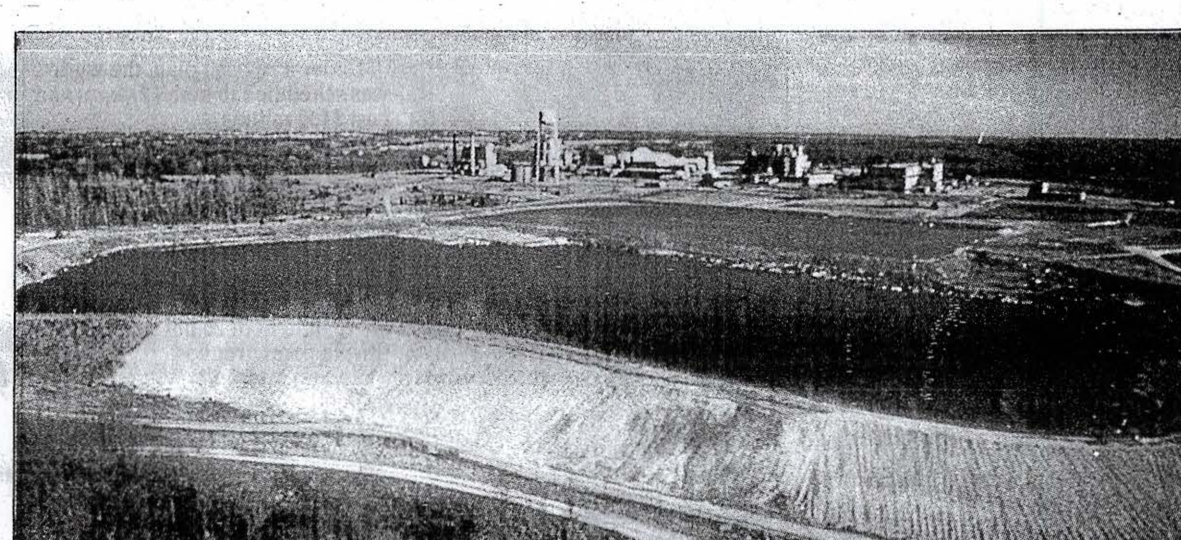
By Carolyn Bower, Louis J. Rose and Theresa Tighe
Of the Post-Dispatch Staff

FIFTH OF A SERIES



Larry Williams/Post-Dispatch

Roger Nelson, head of safety for the cleanup near Weldon Spring, displays a petri dish filled with a uranium compound.



Larry Williams/Post-Dispatch

Waste pits near the two Weldon Spring wildlife areas are filled with uranium, thorium, radium and nitrates. Ducks and geese light on water in the pits.

ROGER NELSON, a feisty man, looks forward to bantering with students as he arrives at Francis Howell High School in St. Charles County. He is there on a mission on this third day of April 1987.

He knows that some students will express fears that they will get cancer or become sterile during the federal cleanup of radioactive contamination at an abandoned uranium processing plant half a mile away.

Nelson, a safety officer on the Weldon Spring cleanup, wants to assure them that they will be safe. His daughter, Corina, attends the school.

As his presentation begins in the school library, Nelson displays a Geiger counter that chirps continually — proof, he says, that radiation exists everywhere. Nelson tells the nearly 150 students that the chances of getting cancer from the radiation are remote.

In the audience is Mary Halliday, a homemaker who is a founder of St. Charles Countians Against Hazardous Waste. Halliday knows that scientists and doctors disagree about the danger of low-level radiation. She also knows that most scientists believe exposure to radiation increases the risk, however slightly, of cancer.

Halliday wants the high school closed or relocated during the planned $400 million cleanup. Otherwise, she plans to take her son, Jason, out of the school. She challenges Nelson's statements.

Through the library windows, students can see the distant ruins of the sprawling Weldon Spring complex. Some buildings are so contaminated that visitors are prohibited from entering them. Mallinckrodt Chemical Works purified uranium and thorium at the plant off of Missouri Highway 94 for the federal government from 1957 through 1966.

During his talk, Nelson asks students to pass around and examine a sealed petri dish containing a uranium compound. By the time it gets back to Nelson, it has a crack in the top. And that triggers a confrontation.

Halliday and her colleagues accuse Nelson of endangering the students' health.

Nelson says the petri dish — even with a crack in it — is safe. He says youngsters would have to eat the compound for it to pose a real threat to their health.

□

A threat, real or perceived, to the health of children turns parents into instant activists.

Nowhere is that more evident than in St. Charles County. The environmental movement there was born 2,000 strong in 1982, when the U.S. Department of Energy proposed permanently storing radioactive waste from five states at the abandoned uranium processing plant just upwind from Francis Howell High School.

The federally owned site is between the August A. Busch Memorial and Weldon Spring wildlife areas, where thousands of families hike, fish and hunt.

During heavy rains, uranium dust washes off the plant grounds into both wildlife areas.

The buildings at the plant still contain uranium and thorium. Radioactive and chemical sludge fill four waste ponds on the plant grounds and a quarry, four miles to the southwest.

The quarry leaks and the ponds seep into the groundwater. The quarry is less than one-half mile from wells that supply about 63,000 St. Charles County residents with drinking water. Officials say the contamination has not reached the well field.

Nobody gave the situation much thought until July 23, 1982, when residents read in the newspaper that the Department of Energy wanted to dispose of radioactive waste from five states at the plant site.

One of those readers, Meredith Bollmeier, a mother and homemaker who lived within walking distance of the plant, swung into action.

With the help of five other mothers, a chemist and a member of the Francis Howell School Board, Bollmeier mobilized the county.

More than 2,000 residents turned out in the Francis

See WASTE, Page 12

JERRY BERGER

Former Dillard's VP Is Back In St. Louis — With Famous-Barr

MEDIA MIX: Real-estaters are on the prowl for a home to befit **Paul Cavalli**, who has been named senior vice president of advertising and sales promotion for Famous-Barr, succeeding **Jo Lawley**. Cavalli is returning to our town after a stint in the same post at L.S. Ayres and Paul Harris Stores in Indy. He left in 1986 for Indy after having served as vice president of marketing for Dillard's. . . .

TBWA Advertising Inc. has parted company with its executive veep and GM, **William Oakey**. The [illegible] that will assume leadership for its St. Louis office consists of **Arthur Gramer**, senior vice president/director of account services; **Mark Lashly**, senior vice president/director of business development; and **James Jolliffe**, senior vice president-creative director. . . .

Mary Beth Whitehead, the surrogate mother in the sensational "Baby M" case, will speak at the Jewish Community Centers Association at 1 p.m. March 23. Whitehead has written "A Mother's Story" (St. Martin's Press) about her fight to keep her daughter. . . .

It was an interesting sightem in the lobby of the London Hilton, where KSD-FM's "Breakfast Club" broadcast the other day. "We gathered quite a crowd," observed **J.C. Corcoran**, "and from the look on their faces, they could not believe what was said on American radio." Today, it's on to the Abbey Road Studios, with the show airing from the spot that the Beatles recorded "I Want to Hold Your Hand" and "She Loves You," among others. Studio engineers and staffers who were on hand for such recordings and those by **Sting**, the **Hollies** and **Stevie Wonder**, will chat with J.C. about their experiences. . . .

And Emerson Electric's CPA wiz, **Brad Law**, scooped up big bucks as a contestant on a taping of "Wheel of Fortune," slated for airing at 6:30 p.m. Wednesday on Channel 5.

FLASH!: The U.S. marshal will trumpet today the foreclosure of the Mansion House properties. It will be called "a judicial sale under court order." FYI: The Housing and Urban Development agency intends to make a single bid of $19 million at the offering for all three Mansion House buildings. The sale will begin at noon March [illegible] at the east entrance to the Civil Courts building.

NAME-DROPPING: James T. Human racked up $7 million in sales for 1988 at Edward L. Bakewell in mostly residential biz. Laurels to him from **Sarah Bakewell**. . . .

Clarion hat-check sweetie **Nan Smith** was toasted the other night on her 75th birthday at her daughter's favorite restaurant, the City Cousin. **Lynn Smith** pulled out all stops, including having her father, **Jim Smith**, and his wife, **Terry**, attend the soiree — direct from their home base in Motown. . . .

Yes, the early-bird (breakfast) specials at Billy Sherman's Deli are supervised by none other than **Early Lott**.

DON'T PRINT THAT!: So howsacome summonses for only peace disturbance were issued to a North Side merchant and his customer, and news of the incident hasn't surfaced?

I mean, more than a few cops raised their eyebrows over the quashing of last week's incident in which the merchant sprayed Mace in the customer's face. She merely wanted to return some clothing for togs that would fit her kiddie. It seems the merchant is a buddy of a high-placed copper. Quick, call a lawyer! (And there are lots from whom to choose, now that the International Academy of Trial Lawyers has adjourned its convention in Palm Springs. Incidentally, the barristers got a new view of litigation from "People's Court" Judge **Joseph Wapner**. If you [illegible] **Tom Hullverson**, [illegible])

PET OF THE WEEK

Renyold Ferguson/Post-Dispatch

Denise is a 1-year-old domestic calico who is litter trained and good with children.

To adopt: Apply in person at the Humane Society of Missouri, 1210 Macklind Avenue, before noon Saturday.

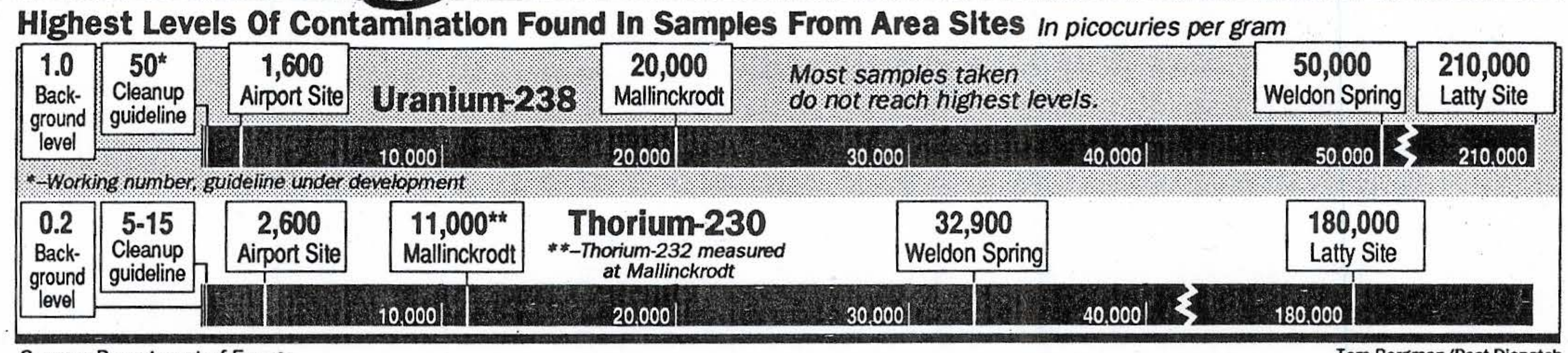
THIS DAY IN ST. LOUIS HISTORY

The 225th Anniversary of St. Louis' Founding 1764-1989

On Feb. 16, 1806, a group of prominent St. Louisans that included fur merchants Pierre Laclede, Manual Lisa and Bernard Pratte issued invitations for a ball to be held at Yosti's tavern. Bitter rivals or suspicious partners in the competitive Indian fur trade, the Creole elite often socialized together, leaving their differences outside the ballroom door.

From The St. Louis Ambassadors
Source: Missouri Historical Society

What's Safe? Experts Differ On Radiation



Source: Department of Energy

Tom Borgman/Post-Dispatch

This chart uses just two of the many radioactive substances at four major waste sites to show how the highest readings exceed cleanup standards. Numerous readings taken on each site show radioactivity ranges from very high to almost nonexistent.

By Carolyn Bower,
Louis J. Rose
and Theresa Tighe
Of the Post-Dispatch Staff

HOW DO YOU decide whether it is safe to live or work near a radioactive waste site in the St. Louis area?

The answer depends on whom you ask. Environmentalists are likely to say the low levels of radiation at St. Louis sites are a risk to your health. Some government spokesmen are likely to say there is no health threat unless you eat the waste.

Neither group is lying.

People disagree because no one knows the effects of low-level doses of radiation.

Because radiation can cause cancer and genetic damage, scientists have studied the effect of low-level radiation on people's health. But the studies do not include enough people to offer undisputable answers. After all, one in every four people in the country dies of cancer, and there are many causes.

In the 1940s, scientists believed there was a threshold below which radiation exposure would not hurt a person. Now, nearly all scientists agree that exposure to any level of radiation poses a risk — no matter how small — of cancer and genetic effects.

That is why when officials set exposure standards they say that a level of radiation is permissible or poses an acceptable risk, never that the dose is safe.

Scientists today disagree about how much cancer is caused by radiation exposure.

Most scientists in the United States say the laws that currently regulate exposure are either too strict or just fine. The International Commission on Radiation Protection shares this position. Some researchers say that the additional cancer caused by the low levels of radiation allowed by law may be too small to measure.

Most authorities believe that anywhere from 10 to 500 people will die of cancer for every million people exposed to one rem, a measure of exposure to radiation.

But Karl Z. Morgan of Atlanta, the physicist who laid the groundwork for radiation exposure standards, now says that no fewer than 1,000 and more likely 3,000 people will die of cancer for every million people exposed to one rem.

Morgan and some others say the standards are eight to 10 times too lenient and may cause needless additional cancer deaths.

Current regulations are based on animal studies and mathematical calculations based on what happened to people exposed to high levels of radiation. Morgan and others say that low-level radiation may work in an entirely different way from high-level radiation. They say standards need to be based on human experience. Britain recently made its radiation exposure regulations more stringent.

Although they would disagree on the size of the risk, most scientists say that the threat to a person's health from sites in the St. Louis area is statistically small.

But scientists also say the effects of radiation are cumulative. We are exposed to radiation from the sun, rocks, X-rays, fallout from nuclear weapons and consumer goods such as mantles for gas lanterns.

Radiation's effects on a person's health also depend on such things as age, sex and length of exposure. Dr. Alice Stewart, a British scientist, says children and pregnant women, among others, may be at greater risk.

If a pregnant woman is exposed to low-level radiation, her child may develop cancer, Stewart said.

Scientists involved with nuclear medicine and nuclear energy say that the risk from exposure to radiation from nuclear power plants, nuclear medicine and radioactive waste cleanups is no greater than other risks that we accept in exchange for modern convenience.

In 1987, for example, 46,000 people died in traffic accidents.

Actuaries deemed 13 deaths an acceptable risk in figuring the insurance cost of the construction of the Gateway Arch in the 1960s. No construction worker actually died on the project.

Most people seem willing to accept a comparable risk from radiation in exchange for medical treatment.

But people seem less willing to accept the risk of radiation from nuclear energy and plants that produce nuclear weapons.

Environmentalists base their opinion that the risk is unacceptable on research by Morgan and others. They point out that over the last five decades, radiation exposure guidelines have changed four times, each time becoming more strict. And they cite the Department of Energy's history of secrecy about radioactive pollution.

So, how do you decide?

The only way you can decide is by finding out the levels of radioactivity present at a site, comparing them to current standards and bearing in mind that some people say those standards are too lenient. You also will have to consider your family medical history and determine how much radiation you are willing to accept in your life.

Dr. Karl Wilson of St. Charles County, director of Four County Mental Health Services Inc., has looked at the facts and says he is apprehensive about letting his daughter, now a sixth-grader, attend Francis Howell High School during the dismantling of an old uranium plant nearby.

Wilson said: "The nightmare as a parent is: What if they find out there was a risk years later? I don't want it to be my child they find out on."

On the other hand, many of the people who work at the cleanup say they will be perfectly comfortable sending their children to Francis Howell during the demolition.

Waste

From page eleven

Howell gymnasium to protest the project at a public hearing on Aug. 10. Energy Department officials say such meetings usually draw between 10 and 70 people.

Federal officials attribute the size of the crowd to the proximity of the site to the high school and people's concern for their children.

Bollmeier agrees.

Before reading that newspaper account, Bollmeier's activities outside her home had been limited to a few interior-decorating consultations for friends or relatives.

Now she was an instant activist. She rapidly developed the courage to pass around petitions and hold news conferences. She learned everything she could about radioactive waste.

"I was like a mother tiger," she said. "I felt a threat to my family and my community. I didn't understand what uranium and thorium were at the time, but radioactive waste — any kind of radioactive waste — seemed like bad news."

Bollmeier began spending every free hour reading federal reports on the plant and quarry, and crawling around the wildlife area with a Geiger counter to measure radiation and a flask for taking water samples. She is now the paid executive director of St. Charles Countians Against Hazardous Waste.

But in the summer of 1982, all she was trying to do was get a crowd out to that first hearing.

"When we saw the stream of cars coming down (Highway) 94, we were ebullient," Bollmeier recalled. "We had collectively thrown the biggest party in town."

The crowd jammed the gymnasium; some people had to be turned away. More than 40 people spoke. Not one was in favor of storing the waste at Weldon Spring.

One speaker threatened to blow up the bridges across the Missouri if the Energy Department tried to bring in the waste.

Kenneth Rothman, who was lieutenant governor at the time, said, "This is the worst possible spot for a radioactive dump or an atomic dump site anywhere in the state."

The crowd cheered.

Officials of the Department of Energy said radioactive runoff was no threat to wells in the county because most wells were dug 700 feet into the earth.

The crowd moaned.

"Mine's 175 feet," one man shouted. "Mine's 200," yelled another.

After the meeting, agency officials said the crowd was one of the most vocal and hostile they ever had encountered. Eventually, the government dropped its plan to bring in waste from five states.

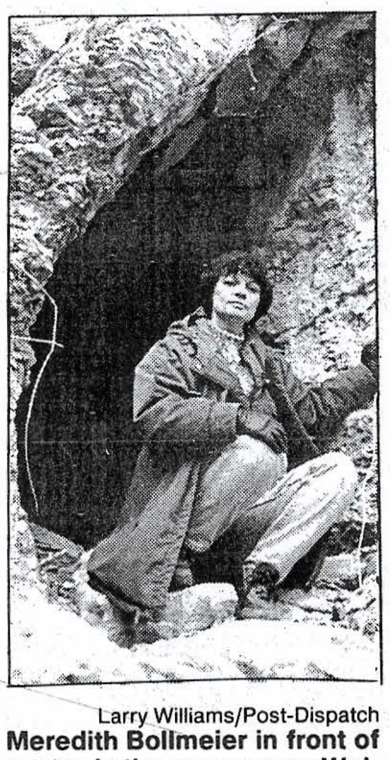
Lea Keller, one of the agency's representatives at the meeting, recalls feeling frustrated that night because the Department of Energy never had a chance to present its case.

"I looked around. I saw the banners. I heard the cheering, booing and jeering," he said. "I was frankly convinced nothing of value would be accomplished. The people had come to vent their frustration. So we listened, and we left.",

Keller, 60, retired two years ago. He spent 30 years working for the federal agencies charged with developing atomic energy for power and defense.

Keller said it is one of the disappointments of his career that he was unable to convince residents in the St. Louis area that the risk is minimal.

"Someone would have to camp on any of the (radioactive waste) sites in the area for 24 hours a day for 50 years to get a dose that can be statistically linked to cancer," he said.



Larry Williams/Post-Dispatch

Meredith Bollmeier in front of a cave in the quarry near Weldon Spring that is filled with hazardous waste.

Bollmeier countered: "We have studied enough federal reports to know how they present select information more protective to the Department of Energy than to the welfare of the citizens of St. Charles."

At the heart of the fears of residents of St. Charles County is concern over childhood leukemia there.

Prodded by area mothers, state health officials took a look at a number of leukemia cases that had occurred in the county.

The state found that 13 children, ages 14 or under, in St. Charles County were diagnosed as having leukemia during a five-year period in the 1970s. That is almost twice the expected rate.

The 13 leukemia cases occurred from 1975 through 1979 — with six cases discovered in 1979 alone. Seven cases would have been normal for the five-year period. Eight of the 13 leukemia victims died.

But in July 1986, after three years of investigation, the Missouri Department of Health announced there appeared to be no evidence linking the unusually high number of leukemia cases to radiation from the old processing plant.

Members of St. Charles Countians Against Hazardous Waste questioned the methods used in the study.

John Crellin, the state epidemiologist who did the study, acknowledged there were significant gaps in the data the Energy Department gave him for radiation dose estimates.

□

Over the years, the St. Charles Countians became masters at questioning officials and nudging state and federal agencies into action. They are credited with bringing the radioactive waste near Weldon Spring to federal attention and pressing until the government agreed to finance a cleanup.

But it was a bit of election-year one-upsmanship that produced the federal commitment to spend money.

In 1984, Walter Mondale, the Democratic nominee for president, was scoring points against Republican incumbent Ronald Reagan by attacking Reagan's record on the environment. He would make his speeches on this topic at hazardous-waste sites.

Four days before Mondale was scheduled to tour the Weldon Spring plant, Reagan stole center stage by announcing a 10-year, $357 million cleanup of the site.

Under a revised plan, the work was scheduled to take 12 years and cost $400 million.

But because of proposed budget cuts, managers on site say that both the cost and the length of time for the cleanup could double.

In July 1986, the Department of Energy set up the first of what would eventually become an encampment of 25 house trailers on the old plant grounds.

Rodney Nelson, a Wisconsin farm boy who grew up to be an engineer and public servant, was one of the first to arrive.

Nelson (no relation to Roger Nelson) is the on-site manager of the cleanup for the Department of Energy. Nothing in Nelson's experience had prepared him for the suspicion he would encounter in St. Charles County.

One afternoon, Nelson asked his colleagues: "Do people really believe that scientists and doctors in this country are in a conspiracy to keep the truth about the dangers of radiation from people?"

Press aide Martin Janowski responded that yes, some people believe that.

Later, Nelson learned the extent of people's fears when he met a woman at a cocktail party. She told him she never opens the windows of her home lest her family be exposed to a particle of radiation from the plant.

Nelson and his family feel quite secure in their home in Lake Saint Louis, which is downwind from the plant. But he finds it hard to answer when someone asks him whether it is safe to move to St. Charles County

"I understand radiation, and I live here," Nelson said. "But there are people who will tell you there is no safe level of radiation, period."

On a personal level, Nelson has won the trust of many county residents. Still, environmentalists question whether scientists know enough about radioactive waste storage and the dangers of low-level radiation to do an adequate job.

Mary Halliday, the treasurer of St. Charles Countians Against Hazardous Waste, says she feels Nelson is sincere.

"I believe Rod Nelson and the other people cleaning up the site will do everything they can to to protect people," she said. "But as long as doctors and scientists disagree about the dangers of radiation, I won't risk my child's health by leaving him at school."

Gerry Everding, a special correspondent of the Post-Dispatch, provided information for this story.

A seven-part Post-Dispatch series

Sunday: Mallinckrodt purifies uranium to help win World War II.

Monday: Uranium workers brush aside early health warnings. Years later, health studies look at cancer rates among employees.

Tuesday: Unknown to area residents, radioactive waste is dumped in North County.

Wednesday: How the Weldon Spring plant became the area's most contaminated site.

Today: St. Charles County residents wage war against federal officials.

Friday: Four "forgotten sites." Waste is buried in 40 pits at Hematite in Jefferson County.

Sunday: Options for cleaning up radioactive waste in the St. Louis area.

Rec'd 01/17/13 from member of the public

LEGACY OF THE BOMB — ST. LOUIS' NUCLEAR WASTE

Rediscovering 4 Forgotten Sites

Government lost track of nuclear operations here and nationwide

By Carolyn Bower, Louis J. Rose and Theresa Tighe
Of the Post-Dispatch Staff
©1989, St. Louis Post-Dispatch

SIXTH OF A SERIES

PROPPED UP in his bed at Cochran Veterans Hospital, Tom Green described how he had worked for 12 years as a truck driver hauling radioactive material in the St. Louis area.

He spoke at a fast clip as Kay Drey, a local environmental activist, struggled to take notes.

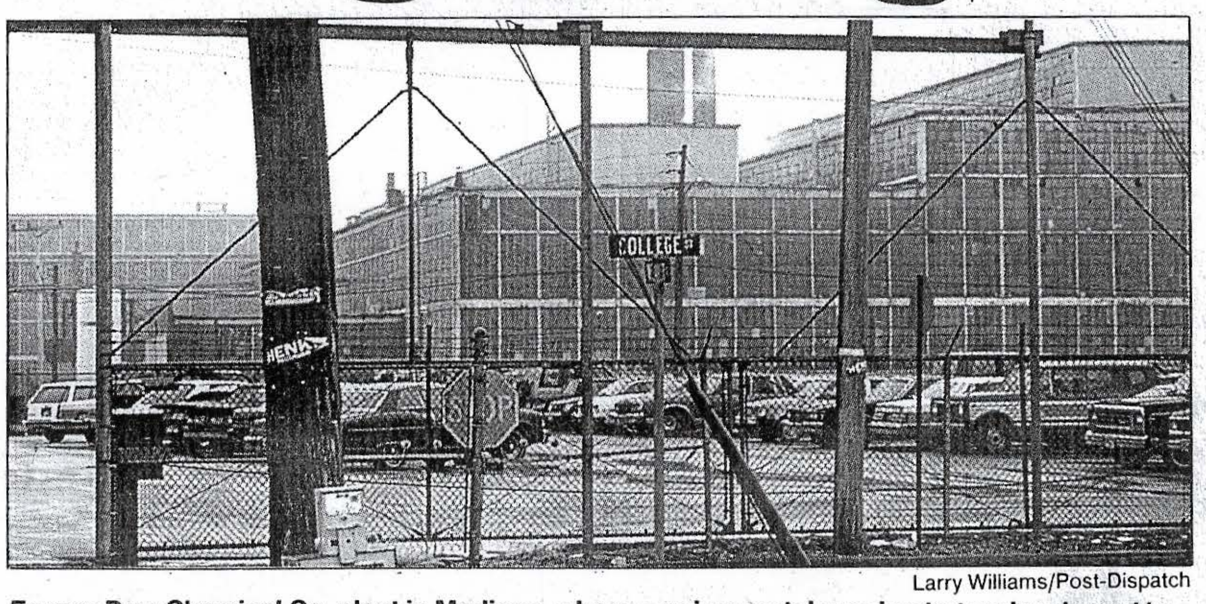
Drey had never met Green before, but she knew from his family that he was seriously ill with cancer of both lungs. Green, who had been a smoker, blamed the cancer on radiation exposure from his job.

As they talked in 1979, Green had no way of knowing that nearly a decade later his comments would lead to the discovery and testing of a potentially contaminated site long forgotten by federal officials.

Green, then 63, told how he had driven truckloads of heavy uranium ingots across the McKinley Bridge to a plant in Madison during the latter half of the 1950s.

He described how the barrel-shaped ingots, 18 inches in diameter and height, were heated and reshaped at the plant at College and Weaver streets then operated by Dow Chemical Co.

Three months after his conversation with Drey in the hospital at 915 North Grand Boulevard, Green died of the cancer that had spread through his spine and intestines.



Larry Williams/Post-Dispatch

Former Dow Chemical Co. plant in Madison, where uranium metal was heated and reshaped in experiments in the late 1950s. The plant is now operated by Spectrulite Consortium Inc.

Now his account is prompting federal officials to take a new look into whether the former Dow plant may be contaminated.

The Madison plant is one of four "forgotten" sites the Post-Dispatch has discovered in the St. Louis area — sites where radioactive material was processed or stored in virtual secrecy after World War II.

There are dozens of such sites across the country that the federal government lost track of in the postwar years.

Department of Energy officials say there is no reason to believe that any of the four St. Louis-area sites poses a serious health threat. In at least one case — the former Tyson Valley powder plant in far west St. Louis County — there appears to be no threat at all.

But the agency plans to conduct tests within the next several months at the old Dow plant and at another Illinois site, the old General Casting plant in Granite City. The tests would determine whether buildings or equipment in those two places are contaminated by radioactivity.

The fourth local site would be hard to test. It was a large building — torn down eight years ago — at the former small-arms plant complex in north St. Louis.

Across the nation, federal and military investigators have spent millions of dollars over the last 14 years searching for and testing such "forgotten" sites.

Investigators admit they may not be able to identify all the factories, businesses and warehouses once involved in the country's top-secret production of nuclear arms.

What follows is a discussion of the four area sites that were lost in the shuffle:

The Old Dow Plant

Tom Green had worked from 1946 until about 1958 for several small trucking companies that hauled materials for Mallinckrodt Chemical Works in north St. Louis. The company processed uranium for the federal government under contract to the Atomic Energy Commission.

About a year ago, Post-Dispatch reporters examining the notes taken by Drey noticed the references to Dow.

They were able to confirm through documents and interviews with former Mallinckrodt employees that experimental uranium extrusion work had been performed at Dow during the late 1950s.

But the Department of Energy had lost track of the experimental work.

"We found nothing regarding it. We can't find anything in (our) records," was the first response from Andrew Wallo, an Energy Department spokesman.

After an extensive search, the agency found two

See WASTE, Page 14

Hematite: No Records Or Markings On Burial Pits

By Carolyn Bower, Louis J. Rose and Theresa Tighe
Of the Post-Dispatch Staff
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HEMATITE, an unincorporated rural area of Jefferson County, is home to the nation's oldest commercial uranium-fuel production plant.

On the plant grounds are 40 earthen pits containing radioactively contaminated material, possibly including a pickup truck. No one, not even the plant's operator, knows the precise location of each pit. Nor does anyone know exactly what is buried there.

Because the plant is about a quarter-mile from Joachim Creek, some critics have said they fear that either the buried waste or plant operations could contaminate the creek. But officials of the Nuclear Regulatory Commission say they have no reason to believe that.

Despite its pioneer role, the Hematite plant has received little publicity over its 32-year history. It lies on a 155-acre tract off Route P, about 35 miles south of St. Louis.

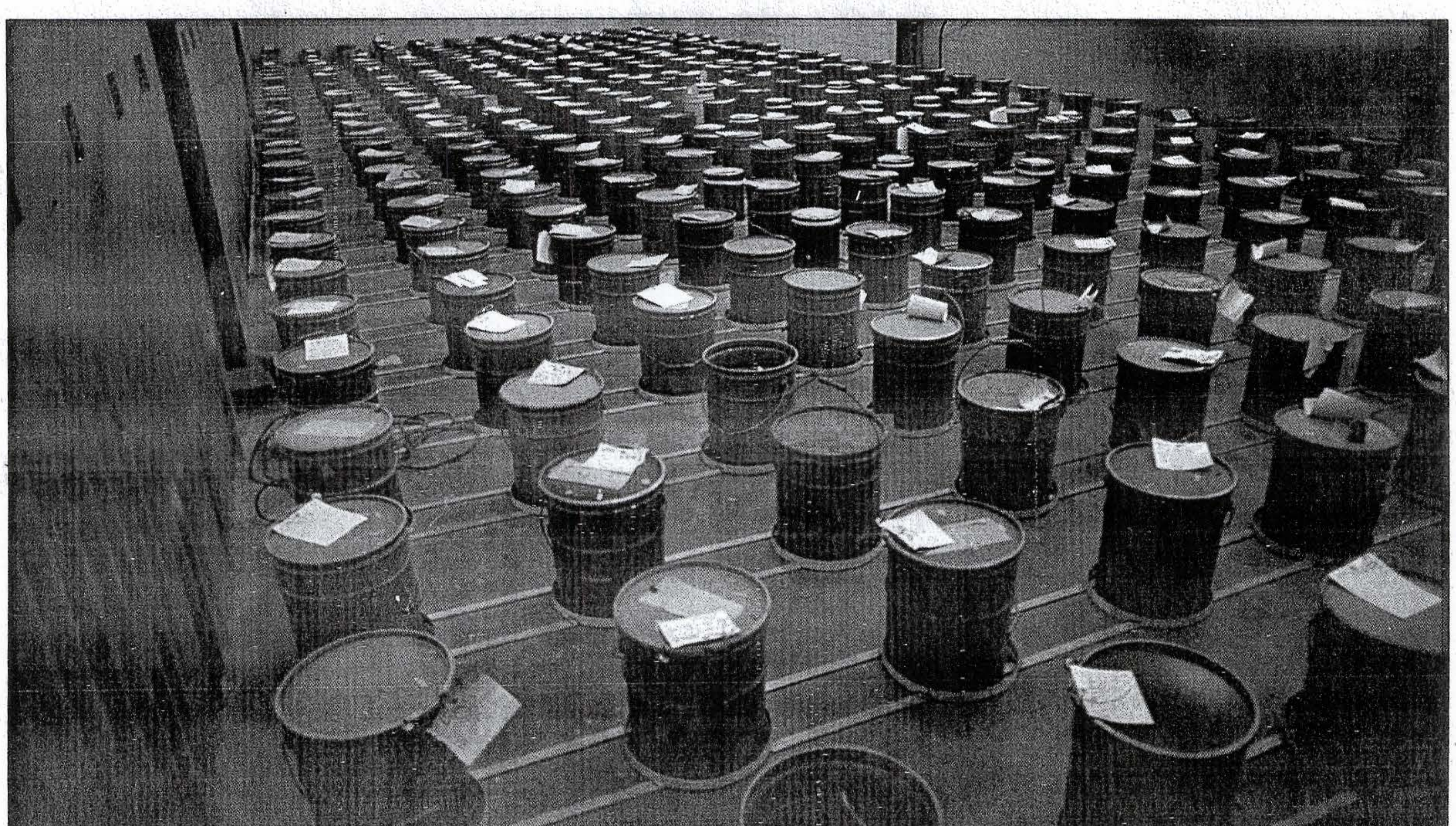
Combustion Engineering Inc., with headquarters in Stamford, Conn., owns and operates the plant. It produces uranium dioxide in powder and pellet form for use as fuel in nuclear reactors.

Combustion Engineering is the fifth operator of the plant since it was built in 1956 by Mallinckrodt Chemical Works.

Burial pits for radioactive waste were first dug at the plant in the late 1950s, according to the NRC.

Each of the 40 pits is said to measure about 20 feet by 40 feet by 12 feet deep. The pits were not lined, capped or specifically prepared to prevent leakage. The buried waste was covered by fill. One federal report said the coverings ranged from 2 to 5 feet in thickness.

Most of the pits are outside a fence that surrounds the plant. But no one knows for sure exactly where. Nor are there records detailing what and how much was buried.



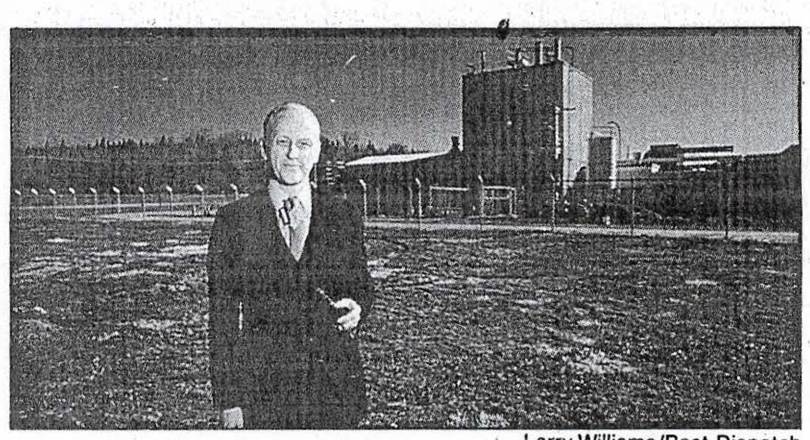
Larry Williams/Post-Dispatch

Said James A. Rode, plant manager for the last 14 years and an employee there since the plant opened: "I can tell you approximately where they are located, because I was here at the times the pits were used. . . . But without markings, you can't exactly identify (their) locations."

According to a 1983 report prepared for the Nuclear Regulatory Commission, some 60 pounds of highly fissionable uranium-235 were scattered throughout materials buried in the pits. There are no other records breaking down the volumes of what was buried there.

For the most part, the burials were made in the late 1950s and early 1960s. They complied with federal

See HEMATITE, Page 14



Larry Williams/Post-Dispatch

ABOVE: **Containers of scrap material and residues at the uranium fuel production plant at Hematite, Mo. The containers are separated to avoid setting off a radioactive chain reaction that would release radiation.**

LEFT: **James A. Rode, plant manager, standing on waste burial grounds outside the plant.**

THIS DAY IN ST. LOUIS HISTORY

The 225th Anniversary of St. Louis' Founding 1764-1989

On Feb. 17, 1780, [illegible] Spanish St. Louis. His strategy included convincing Indians friendly to British fur traders to attack the villagers who, he believed, were aiding George Rogers Clark and the American rebels.

From The St. Louis Ambassadors
Source: Missouri Historical Society

INSIDE

"True Believer" and the second half of "Little Dorrit" are among the movies reviewed.

PAGE 3

JERRY BERGER

Gucci Stores To Be Reclaimed By Parent Firm

BIZ BEAT: Gucci stores at Plaza Frontenac and in Kansas City and Pittsburgh owned by our town's Sanford and Richard Weiss and Harold Seidel will revert back to the parent company, Gucci of America, [illegible]

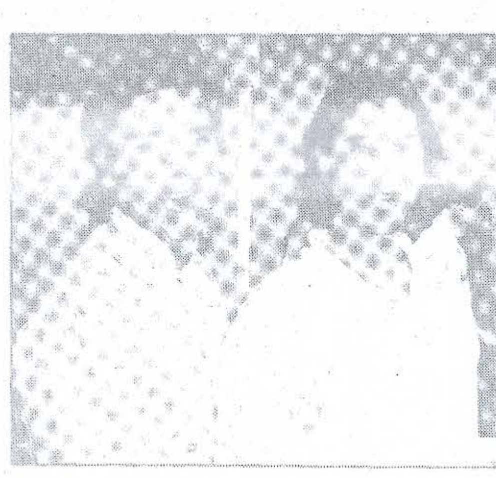
[illegible] America, based in Seacaucus, N.J., to end the arrangement. The Gucci family divested itself of the stores last July. . . .

Landowner Jack Sheehan claims that Borman Development *is* a shell corporation of the Lieberman Corp. and has entered into a contract to buy from him 360 acres north of Eureka for the construction of a subdivision, near The Legends. So far, the Lieberman brothers have not returned phone calls from this humble hack. . . .

And, drinks are on the house, courtesy of John Fox, GM of Gardner Advertising, which has landed the account for Barnes Hospital and has begun a powerhouse push for the celebration of Barnes' upcoming 75th anniversary.

BERGER BITS: Congrats to Mark and Michael Del Pietro, who have begun construction on the expansion (of 100 more seats) at their West County dinery, Michael's. The twosome, barely into their 20s, also own Del Pietro's on Hampton Avenue. . . .

Stardust is falling on our town with the recent Contemporary Productions bookings of: Bob "Captain Kangaroo" Keeshan and Marc Summers, star of TV's "Double Dare," for the Child's Fair, March 10-12 at the Cervantes Convention Center; the Amazing Kreskin for a Paraquad benefit March 5 at the Westport Playhouse (for tix, call Marlene Johnson, 776-4475); and the Four Tops, Buckwheat Zydeco and Galaxy for the big Zoofari '89 on June 16. . . .



Mark and Michael Del Pietro

Opera Theatre's Charles MacKay said there have been thoughts about expanding the company's season. The statement came after he was asked whether a spat was brewing between OTSL and the Repertory Theatre over the length of use of the Loretto Hilton facilities. "I will discuss the issue of the Loretto Hilton with Steve Woolf (of the Rep) over lunch," MacKay said Wednesday. "We're not certain if it's feasible." MacKay then lauded Webster University for allowing both companies to use the facility at no [illegible]

Jane and Whitney Harris parlayed an item they won at an auction into a 25th wedding anniversary cocktail party in their honor the other night at Whitey's. The party for 75 had been bought by the Harrises and businessman Jeff Weiner at an auction sponsored by the Japan America Society and the Missouri Concert Ballet. . . .

Channel 5's special correspondent for sports, Jay Randolph, has signed a new multiyear contract with NBC. Randolph has been with the peacock since 1968. He'll continue to do play-by-play for NBC's coverage of the NFL, major-league baseball, regional college basketball, the PGA and Senior tours, the Professional Bowlers Association Tour and horse racing's Breeders' Cup. . . .

The who's who of the business world converged the other night on David Slay's La Veranda, including Jill and Martin Snyder, the Edison Brothers Stores exec, with Sherri and Don Sherman, the famed barrister; and Ann and Mike Marutto, the Boulevard Motors chief, with Iris and Larry Buffen, the wholesale druggist. . . .

Happy 75th to Albert Prel, who, along with his wife, Anita, will be given a celebration this week at the Blue Water Grill by their son and the grill's newest tub-thumper, floral designer Jon Prel.

LEGACY OF THE BOMB — ST. LOUIS' NUCLEAR WASTE

Waste

From page one

brief documents that mentioned the extrusion work at Dow.

"We hope to be conducting a radiological survey there later this year," Wallo said. "You could get some contamination in the equipment or the building somewhere depending on the equipment and procedures they used."

Wallo said he doubted there would be enough contamination to pose any serious health threat.

Dow operated the plant in Madison from 1954 to about 1969, employing about 850 workers at one point. The plant has been used primarily for the fabrication of aluminum and magnesium metals.

The plant's current operator is Spectrulite Consortium Inc., which took over the facility in late 1986. About 450 people now work there, producing rolled and extruded aluminum and magnesium products.

A Spectrulite spokesman said: "We are aware of the interest being displayed in the incident in the past. But we are not commenting."

Officials at Dow's corporate headquarters in Midland, Mich., could find no reference to the extrusion work done at the Madison plant.

Neither could Mallinckrodt. Raymond F. Bentele, president and chief executive at Mallinckrodt, said the company long ago had turned over to the government any records of work it performed for the old Atomic Energy Commission.

In the extrusion process, heated metal is reshaped by forcing it through a specially designed opening.

Uranium bars that ultimately would be used in nuclear reactors were extruded from cylindrical ingots of uranium metal. Each ingot weighed about 3,300 pounds and measured 18 inches in height and diameter.

The tests at Dow were intended to help Mallinckrodt perfect large-scale extrusion procedures for use at the Atomic Energy Commission's uranium processing plant near Weldon Spring.

Wallo said that contamination could have occurred during the heating and extrusion process if uranium oxide flaked off the metal and was carried as dust or small specks in the air.

"There is potential for there to be residual radioactive material above our guidelines, but we certainly don't expect any significant hazard or risk," he said.

The old Atomic Energy Commission generally required careful control of uranium metal for security reasons as well as safety, Wallo said. Also, he said, some degree of cleanup or decontamination normally was required once a job was completed.

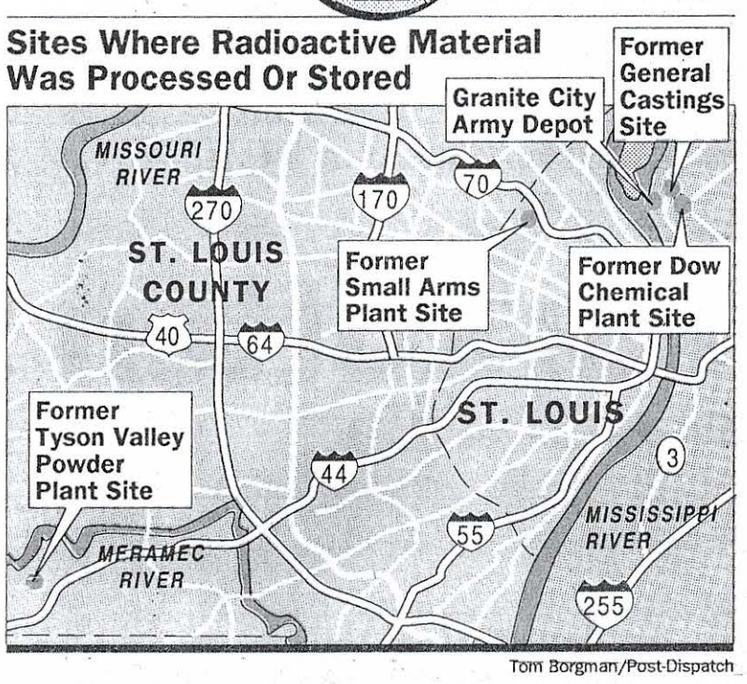
Environmentalist Drey takes a more pessimistic view. She said she was concerned that uranium-oxide dust might have settled into cracks in floors, ceilings or concrete walls and still be present.

Robert Alvarez, a frequent DOE critic, said he would not place much confidence in the effectiveness of decontamination efforts at Dow or anywhere else during the late 1950s.

"I am unaware that there were any real standards for decontamination at all at that time," Alvarez said. He is an environmental research professional who is now on the staff of a Senate committee investigating the Energy Department's nuclear programs.

Granite City Plant

On his deathbed, Green also told Drey that uranium metals may have been taken for X-ray to the former Dow plant in Madison.



Tom Borgman/Post-Dispatch

Tom Green
1978 photo

But Energy Department researchers, while checking that statement, found this work actually had been done in Granite City at the old General Castings plant.

From 1958 to about 1966, records show, uranium products from Mallinckrodt had been taken to the General Castings building to be examined for defects with equipment similar to a large X-ray machine.

Now the structure, isolated and no longer in use, is part of the Granite City Steel complex.

Wallo said the Energy Department hopes to test the building within the next few months.

Small Arms Plant

In 1979, St. Louis officials bought and later razed a massive concrete building to make way for an industrial park. They had no way of knowing that tons of radioactive uranium material had been stored at the building after World War II.

Now, eight years after the demolition, no one seems sure where all the rubble from the 725-foot-long structure was hauled and buried. Nor does anyone know whether the building became contaminated by the products stored there.

The building — known as the "proof house" — was part of the Small Arms Plant complex off Goodfellow Boulevard in north St. Louis. It was used during World War II to test-fire machine-gun ammunition manufactured at the complex.

After the war, from 1947 to about 1950, the building was virtually stripped bare and later used by the old Atomic Energy Commission to store uranium products destined for government facilities producing nuclear fuel and weapons.

Workers using flashlights and often groping in the dark in the gutted firing ranges stacked metal and fiberboard containers of uranium products into thick-walled concrete corridors that ran through the building.

Sources interviewed by reporters said that most items stored in the proof house were finished products from Mallinckrodt awaiting shipment to government facilities at Oak Ridge, Tenn., and other locations.

Federal officials can find no documents relating to the storage.

Wallo of the Department of Energy said parts of the huge building could have become contaminated. But, he said, it is doubtful this ever would have posed any serious health risk.

Alvarez, the critic of the Energy Department, argued that the Energy Department lacks the documentation needed to draw valid conclusions about the site.

"If they weren't monitoring it, they can only guess," said Alvarez.

Mallinckrodt officials say they have no records about what was stored at the proof house; all such records were turned over to the government in 1966.

Harold Thayer, retired Mallinckrodt board chairman, said he knew of no way to accurately gauge the volume of material that may have been stored in the cavernous building.

"There were tons of it," he said. He said the building was used for temporary storage of such materials as uranium tetrafluoride and uranium dioxide — commonly referred to then as green salt and brown oxide.

Others recalled seeing wooden crates containing uranium metal stored at the proof house, as well as empty 55-gallon drums. The materials were trucked from Mallinckrodt to the proof house and later shipped out by rail.

Thayer said Mallinckrodt had used the building at the government's request. He said he did not know whether efforts had been made to decontaminate the structure, or whether decontamination had even been needed.

Asked if there could have been contamination problems, Thayer said: "I don't see how, unless somebody broke a container and spilled it or dropped it. It was all sealed products, as far as I know."

During the Korean War, the government decided to reactivate a number of buildings at the Small Arms complex, including the proof house. A St. Louis firm, Alport Construction, got a contract in 1954 to rehab the structure to put in more sophisticated ammunition-testing equipment.

In 1979, the city's Planned Industrial Expansion Authority bought a 44½-acre tract at the former Small Arms complex, including the proof house. The purchase was part of an unsuccessful attempt to persuade General Motors Corp. to use the property and keep open its nearby assembly plant.

One year later, the agency contracted with Spirtas Wrecking Co. to demolish about 50 structures at the site, including the proof house.

Arnold Spirtas, president of the company, said that his company no longer had records relating to the demolition or which landfills or dumps were used to dispose of the rubble.

Spirtas said he could not recall details, but he said his company had fully complied with terms of the demolition contract.

One former employee of a nearby business told reporters he had watched some of the demolition work and believed that part of the rubble from the proof house had been buried on site.

However, Thomas J. Mullen, of the city's Economic Development Corp., said he had spent a lot of time at the site and he was sure all of the rubble from the building had been hauled off.

Mullen said he did not know where the wrecking firm took the debris.

Tyson Valley Powder Plant

This is the case of the disappearing waste.

More than 60 tons of radioactive material were stored after World War II in concrete bunkers at what is now Washington University's Tyson Research Center in far west St. Louis County. It was moved somewhere — presumably to a plant near Pittsburgh — but no shipping records can be found.

Federal records that had gone unnoticed for decades show that the old Atomic Energy Commission used at least two bunkers at Tyson for storage in the late 1940s.

The site, about 20 miles west of St. Louis on Interstate 44, was then part of the Tyson Valley Powder Plant, where explosives and ammunition were stored during World War II. The government turned the 1,963-acre tract over to the university in 1963 for use in wildlife and environmental research.

Documents found last year in AEC files said the radioactive material was stored in 250 wooden barrels and metal drums — including 14 containers without tops. The residue was described as "68,103 pounds of C-Special and 53,252 pounds of C-4."

C-Special and C-4 were code names for slag residue from the production of uranium metal.

The AEC stored the material at Tyson from at least May 1947 through March 1948, when memos were being exchanged to negotiate shipment of the residue to a plant at Cannonsburg, Pa.

Federal officials say they are not sure where the material was taken.

University officials did not learn about the storage of radioactive residue at Tyson until reporters brought it to their attention last year.

With the university's cooperation, reporters visited the site in June and took radiological readings in and around 16 of the old concrete storage bunkers. None of the readings showed radiation exceeding normal background levels.

University radiation specialists later tested all remaining structures at the site, including 50 concrete bunkers.

No elevated readings were found, university officials said.

Gerry Everding, a Post-Dispatch special correspondent, contributed information for this story.

Hematite

From page one

regulations then in effect. Such burials no longer are allowed by the NRC.

The report in 1983 on the radiological survey conducted for the NRC said in part:

"Apparently, the bulk of buried material consisted of paper, plastic and wood items. Some metal items, such as pipes and buckets, have been buried, although no major metallic objects, except possibly a pickup truck, were disposed of."

". . . The overall conclusions are that relatively small quantities of uranium have been buried and that the buried material is essentially stable at this time. The burial pits have little or no effect on the population or the surrounding environment."

In 1985, a former worker at the Hematite plant told the Nuclear Regulatory Commission he feared that leakage from the burial grounds might be contaminating nearby Joachim Creek.

Metal barrels used in the burial of radioactive wastes during the 1950s and 1960s were not always sealed, said the complainant, whose name was kept secret by the agency. He also alleged that water had been observed on occasion in the burial trenches.

But after interviews and a review of documents relating to the pits, the NRC concluded that there was no evidence to support allegation.

Over the years, the plant at times processed a material that was 90 percent uranium-235. But for the last 14 years, Rode said, the plant has processed material that was no more than 5 percent uranium-235. This has helped reduce risks of accidents and contamination.

"We don't think of ourselves as posing any more risk to the public than any other chemical plant, and probably less, because our industry is heavily regulated and inspected," Rode said.

Nuclear Regulatory Commission records show that the plant was authorized for one year in the early 1970s to possess up to 10 kilograms of plutonium in the form of sealed fuel rods or assembled fuel elements.

That's roughly enough to trigger an atomic bomb of the type that was dropped on Nagasaki at the end of World War II. Plutonium is one of the most toxic and carcinogenic substances known.

But in a recent interview, Rode said: "We have never had or processed plutonium here at the Hematite plant. . . .

"It would have been a cause for concern" if plutonium had been brought to Hematite, Rode added.

Post-Dispatch map

"I am very happy it was never done. . . . That is a horse of a different color. . . . You have to have a facility that is designed for it."

A seven-part Post-Dispatch series

Sunday: Mallinckrodt purifies uranium to help win World War II.

Monday: Uranium workers brush aside early health warnings. Years later, health studies look at cancer rates among employees.

Tuesday: Unknown to area residents, radioactive waste is dumped in North County.

Wednesday: How the Weldon Spring plant became the area's most contaminated site.

Thursday: St. Charles County residents wage war against federal officials.

Today: Four "forgotten sites." Waste is buried in 40 pits at Hematite in Jefferson County.

Sunday: Options for cleaning up radioactive waste in the St. Louis area.

Waste Drums Stored Secretly

THE federal government secretly stored more than 25,000 drums of radioactive residues at the U.S. Army Depot in Granite City for a five-year period during the 1960s.

Some of the drums were so badly rusted that they leaked or allowed water to collect in them. Others ruptured and spilled their contents while being transferred to rail cars and trucks for shipment.

The drums contained more than 6 million pounds of thorium-bearing residues and rare-earth residues. They were placed at the depot under a program to guarantee the nation supplies of "strategic materials."

In the early 1960s, government officials, concerned about the deteriorating drums, got permission from the Atomic Energy Commission to dump them in a quarry near Weldon Spring.

More than 3,400 drums were pitched into the quarry before the General Services Administration made a deal to sell all 6 million pounds of the residue to a New York-based firm. The company, seeking to recover metals, even sent workers back to the quarry to haul out the discarded drums.

The last of the residue was shipped from the area in May 1966.

At the direction of the Nuclear Regulatory Commission, a radiological survey was made about six years ago at the 930-acre Granite City complex, which is used by some 55 federal agencies.

The survey report said that no radioactive contamination was found.

MARTHA CARR

Dog Gets No Water As Punishment

Dear Martha Carr: There is a dog out here near where I live that never gets any water. He barks almost continuously as a result.

The daughter in the household told us that they don't give him water because he spills it, so to punish him, they just don't give him water him any more. She said they don't care if he "thirsts" himself to death.

I have called the Franklin County police, but they don't do anything about it because it's not in any town. I have called the Pacific Police, and they said it's out of their jurisdiction. So you see, nobody cares out here. I was under the impression that you were to report any animal abuse. That is what I did, but they just don't care.

I am hoping you can consult someone who does and see to the matter. Please do what you can, for the poor dog's sake.

NO NAME

You can call another place — the Humane Society of Missouri, an organization dedicated to the protection of abused animals. The rescue-investigation number is 647-4400.

Animal lovers have also united in various other groups that may be able to help the dog, so if your call to the Humane Society is not answered within a few days, let me know and I shall give you several other places to call for help.

□

Alumnae Alert:

Ursuline Academy class of 1939, for a 50th reunion in October: **Mary Lonergan, Jane Sprick Fuchs, Bernice Schulte Veanes, Frances (Bonnie) Stevens** and **Virginia Lee Bruck.** Please refer information to

Ginnie Luth Polito
1740 Canary Cove
Brentwood, Mo.63144
Phone: 961-5747

Hadley Vocational High School Stenographic Class of June 1939, for a June reunion, wants information about **Margaret Mary Hagen** and **Miriam Schweitzer.** Class contacts can be reached at 352-8236 or 645-0951.

□

Dear Martha: I would like very much to have the address of some retailer or manufacturer that sells doll parts.

I have two very old dolls; one needs arms the size of a 3 year old.

M.S.O.

Replacement parts should be available from one of the places listed under "Doll Hospitals" in the Yellow Pages, or from craft shops, also listed in the Yellow Pages, that mention dolls in their ads.

You might also consider a trip to the library to look in various home or needle craft magazines for ads for doll manufacturers.

□

Wanted: Adults, age 55 and older, who may be interested in making a fun, creative and very much appreciated contribution to the community to join either "The Story-spinner" or "Trouping Puppeteers" through the Jewish Community Centers Association.

Members of the groups attend classes on the art of storytelling or puppetry at the JCCA, and then perform their shows at club groups, preschools, senior centers and other organizations throughout the area.

For more information, call the JCCA Cultural Arts Department at 432-5700.

□

Always facing new problems and not knowing which way to turn? Write to Martha Carr. Address your letter to her at the St. Louis Post-Dispatch, 900 North Tucker Boulevard, St. Louis, Mo. 63101.

SYDNEY OMARR

Scorpio: You'll Enjoy Last Laugh On Skeptics

NOTE: Horoscopes have no basis in scientific fact and should be read for entertainment, not guidance.

ARIES (March 21-April 19): Family obligation results in change of plans. Your "celebration" is put off for at least 24 hours. Current emphasis on security, possible change of locks. Older individual complains about "telephone messages."

TAURUS (April 20-May 20): Problems related to close relative are actually superficial despite "moans and frowns." Change routine, highlight entertainment and possible purchase of additional wardrobe. Gemini figures prominently.

GEMINI (May 21-June 20): Cycle moves up, goal is in sight and you'll be aware of it. Position strong, financial picture brightens. Scorpio native cooperates in effort to finish major task. Health report will relieve tension.

CANCER (June 21-July 22): Numerous promises, made approximately one month ago, will be fulfilled. Almost as if a breath of fresh air, you get verifications and "back payments." Member of opposite sex says, "You're really something!"

LEO (July 23-Aug. 22): Family "secret" is let out of bag. More humor than sadness is featured. Focus on family relationships, gifts representing tokens of affection. You're "forgiven" by one temporarily immobile. Taurus plays role.

VIRGO (Aug. 23-Sept. 22): Report that had been withheld is released, represents valid reason for joy. Emphasis on performance, payments, royalties. Scenario also features greater acceptance by peers. Pisces figures prominently.

LIBRA (Sept. 23-Oct. 22): You'll successfully meet challenge of added responsibility. Love relationship, temporarily derailed, can again run smoothly. You'll have to make the extra effort. Emphasis on security, promotion, prestige.

SCORPIO (Oct. 23-Nov. 21): You'll have last laugh on those who claimed you were "chasing rainbows." Invitation relates to congratulatory message, travel, publishing. Romantic interests intensify. Aries, Libra persons figure prominently.

SAGITTARIUS (Nov. 22-Dec. 21): Financial "embarrassment" is temporary. You discover new ways of achieving goals. Scenario highlights creativity, style, romance. Legal tangle "melts." Additional funds could be "on the way." Leo involved.

CAPRICORN (Dec. 22-Jan. 19): Collect information, synthesize data. You are on brink of major discovery. Relates to personal and professional activities. You'll be offered contract or unique written agreement. Older woman likely to be involved.

AQUARIUS (Jan. 20-Feb. 18): Play waiting game. Some people insist on playing "hide and seek." Don't become part of foolish runaround. Your services are required. Reward is due and you can be confident. Sagittarius native represented.

PISCES (Feb. 19-March 20): Relationship that had been "rocky" becomes stable. You are free to plan ahead, to get on more solid emotional-financial footing. Long-distance communication relates to romance, possible journey.

IF FEB 17 is your birthday, you are ready for fresh start, a "second chance" where love is concerned. Current cycle emphasizes renewal, vigor, optimism. You'll gain greater independence, your own style will be emphasized. Cancer, Capricorn persons play important roles in your life. You work well under pressure, you are capable of meeting deadlines, you are intense, romantic, stubborn and sentimental. Financial bonanza is possible for you in March. July, however, will be your most memorable month of this year.

BRIDGE TIPS

By Charles H. Goren and Omar Sharif

Both vulnerable. South deals.

NORTH
♠ K Q 3
♡ 10 9 3
◇ A K Q 10 2
♣ 10 8

WEST
♠ J 9 6
♡ Q 5 2
◇ 7 6
♣ J 8 7 6 2

EAST
♠ A 5 4 2
♡ J 7 6 4
◇ 9 3
♣ A Q 4

SOUTH
♠ 10 8 7
♡ A K 8
◇ J 8 5 4
♣ K 5 3

The bidding:

South	West	North	East
Pass	Pass	1 ♡	Pass
2 NT	Pass	3 NT	Pass
Pass	Pass		

Opening lead: Six of ♣

Some bridge players are people-eaters — they cannibalize their partners by making life as difficult as possible for them at the table. But a partner who solves your problems for you is not only worth his weight in gold, but a sure winner.

As a passed hand, South's jump to two no trump showed a balanced 11-12 points. With his fine suit and good intermediates, North had an easy raise to game.

West led the six of clubs, and East made the correct technical play of the queen. Declarer took his king and started to run diamonds. On the third round of diamonds, East discarded the ace of clubs!

Had East lost his mind? Far from it. From the Rule of 11, East could tell that declarer had only one card higher than the card led by West. Therefore, East knew his partner held both the jack and nine of clubs. He was afraid West might think declarer held the ace of clubs, and let go of one or more clubs. This defense was sure to defeat the contract.

But couldn't East have accomplished the same thing by rising with the ace of clubs and continuing with the queen? No! Declarer would simply hold up the king of clubs until the third round. As the cards lie, West has no fast entry, so declarer would have time to force out the ace of spades and come to nine tricks via one spade, two hearts, five diamonds and a club.

Drastic cases require drastic remedies.

On Today's Editorial Page
A Subsidy For The Symphony
Editorial
The Worst Of Both Missiles
Editorial

ST. LOUIS POST-DISPATCH

FINAL ★★★★★

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Soviet Offers Plan For Mideast Peace

Compiled From News Services

DAMASCUS, Syrian — Soviet Foreign Minister Eduard A. Shevardnadze disclosed on Saturday a Middle East peace plan that is based mainly on the involvement of the U.N. Security Council.

He then scheduled meetings this week in Cairo, Egypt, with Israeli Foreign Minister Moshe Arens and Yasser Arafat, who heads the Palestine Liberation Organization — apparently to advance the peace plan.

The Soviet foreign minister is on a five-nation tour of the Middle East, a tour that does not include Israel. The Soviet Union cut relations with Israel over the Six-Day War of 1967.

Shevardnadze announced in Damascus Saturday that the Soviet Union would ask the U.N. Security Council to convene an international conference on the Middle East. He said such a meeting should involve all the parties concerned, including the PLO.

He then outlined a three-stage plan that he said should be carried out within nine months:

- First, the foreign ministers of Security Council members should hold a special session to discuss the matter.
- Second, the five permanent members of the council — the United States, the Soviet Union, China, France and Britain — should "assume the function of a preparatory body for the conference."
- Third, the United Nations as a whole should help the parties involved work out their differences.

Israel has rejected the idea of an international conference, but Israeli Prime Minister Yitzhak Shamir has said that a U.S.-Soviet conference or one sponsored by the United Nations could serve to bring Israel and the Arab nations together.

Eduard A. Shevardnadze
Soviet foreign minister

Israel also has made the restoration of Soviet-Israeli relations a condition

See MIDEAST, Page 6

Solidarity Accepts Step To Free Vote

Compiled From News Services

WARSAW, Poland — Solidarity, the Polish trade union, said Saturday that it would tentatively accept a government electoral change that will guarantee parliamentary seats to the opposition but ensure a majority for the Communist Party and its allies.

"We think that this is a move in the right direction that will lead in the future to completely democratic elections," Solidarity spokesman Janusz Onyszkiewicz said.

"But we understand necessities and the need for stabilization in a transition period," he said. "The authorities expect that the next elections will not be fully democratic, and we accept this idea."

Solidarity was suppressed under martial law in 1981. It started talks this month with the government that are intended to result in the union's becoming legal again and in a set of political and economic changes.

The union has boycotted all Polish elections since its suppression, describing them as a facade designed to maintain Communist Party control of political life.

Other Solidarity leaders indicated Saturday that the government's proposal appeared to be acceptable only if other political changes were made.

Jacek Kuron, a senior Solidarity adviser, said: "A declaration as such has no significance. What is significant is (increasing) the broad democratic process" through other political changes.

"What we want is to get the process of democratization started," he said. "When society is an organized force, it will be able to ensure that subsequent elections could be free."

The government and Solidarity say the next elections, due in June, could be arranged so that the party and its allies win about 60 percent of parliamentary seats, with opposition and independent candidates taking the rest.

Government negotiator Janusz Reykowski said the two sides did not discuss specific allocations of seats when they met Saturday.

Reykowski said the government

See SOLIDARITY, Page 7

LEGACY OF THE BOMB — MANHATTAN PROJECT — ST. LOUIS' NUCLEAR WASTE

Looking Ahead

Waste War Looms As Cities Grapple Over Sites, Funds

By Carolyn Bower, Louis J. Rose and Theresa Tighe
Of the Post-Dispatch Staff

LAST IN A SERIES

St. Louis is by no means alone in trying to figure out what to do about radioactive waste. The problem is national in scope. It pits cities, counties and states against one another in a scramble for limited federal cleanup money.

Especially stiff competition is coming right now from operating weapons plants in Fernald, Ohio; Rocky Flats, Colo.; Hanford, Wash.; and near Aiken, S.C. Safety problems at those plants are receiving intense public scrutiny.

Cost estimates for cleaning up all present and former installations connected with the nuclear-weapons industry range from $130 billion to $200 billion. The cleanup price tag for the St. Louis area's portion now stands at $700 million.

"Everyone wants his site cleaned up," says Mike Kosakowski, a regional official of the Environmental Protection Agency.

"There is not enough money in the bank. There is not enough engineering talent to address all the sites."

Larry Williams/Post-Dispatch

Tire tracks can be seen on this sign warning that the Berkeley ball fields are closed. They were closed because of radioactivity.

Cleanup issues are at the forefront here 47 years after radioactive waste began piling up from the processing of uranium and other materials for the atomic bomb and the Cold War nuclear-arms race.

Over that time, virtually no progress has been made toward permanently containing radioactive materials.

To some, the problem borders on the unsolvable. Said environmental activist Kay Drey: "There's no good place to safely dispose of it. We may never know what to do with what we have."

Even the federal government ad-

See WASTE, Page 16

Cleanup Pledge By Bush

By Robert L. Koenig
Post-Dispatch Washington Bureau

WASHINGTON — President George Bush, responding to a quick lesson about radioactive waste in St. Louis, has told U.S. Sen. Christopher S. Bond and U.S. Rep. Jack Buechner that he would try to restore some federal money for the area's cleanup efforts.

Both Buechner, R-Kirkwood, and a spokesman for Bond, R-Mo., said Bush had taken an active interest in the problem after he got a glimpse from the presidential limousine of a waste site near Lambert Field on Friday. Bush was being driven to a speaking engagement at Washington University.

"The president said, 'My God, I didn't know that site was so close to the airport,' " Buechner said in a telephone interview.

"When I brought up the problems with the funding levels in his budget proposal, Bush said he would ask in a supplemental (budget request) to reinstate the money for the airport site and the Latty Avenue site" in Hazelwood.

Bush's recent budget proposal — like the budget that former President Ronald Reagan submitted in January — does not include $1.5 million that had been planned for environmental studies of radioactive contamination at the airport site and other spots in St. Louis and St. Louis County, a spokesman for the federal Department of

See CLEANUP, Page 16

Cleanup Of Oil Spill Questioned

By Virgil Tipton
Of the Post-Dispatch Staff

Four former workers hired to help Shell Oil Co. clean up a major crude oil spill in central Missouri allege that they were told to use sand, brush and rocks to cover oil that sometimes collected in ankle-deep pools along the banks of the Missouri River.

One former worker said he and about 20 other workers had been told twice to dig holes in sandbars and to bury the oil-stained plastic coveralls they had been wearing.

And foremen told at least two crews that the work was being done so the banks of the Missouri River would look clean to officials flying overhead, the former workers said.

" 'Cover it up so they can't see it from the air,' " said Brett Bockting of Gasconade, one of the workers. "That's exactly what they said."

A cleanup supervisor said Friday that workers had been told to cover "small pools" of oil.

The complaints were made in interviews with the Post-Dispatch last week. Such practices would be violations of Shell's cleanup plan. A state official said the practices would be unsubstantiated rumors.

Shapiro said the company would not approve of covering pools of oil with sand or of using rocks and brush to cover oil spots. Nor would the company clean up the area in an environmentally sound manner," she said.

Larry Williams/Post-Dispatch

Brett Bockting of Gasconade overturning rocks he said were used to cover up oil from a Shell Oil Co. pipeline spill on the south bank of the Missouri River east of Hermann.

Jim Geeding, owner of the company that hired the former workers, said some of the complaints were "hard to believe." And an outside supervisor for the company — Geeding Construction of Troy, Mo. — denied that the practices workers complained about.

But the supervisor, Dale Geeding, Jim Geeding's son, said workers sometimes had been told to cover small pools of oil with sand.

The workers interviewed had worked briefly for Geeding Construction, one of the companies Shell

See SPILL, Page 11

Health Officials Criticize Doctor's AIDS-Test Pitch

By Robert Manor
Of the Post-Dispatch Staff

A doctor in St. Louis is offering to certify dentists as being free of the AIDS virus to reassure their patients.

Health officials say the service is worthless and counterproductive.

Dr. Napoleon S. Maminta, a pathologist, said Saturday that he has mailed letters to 100 dentists in this area offering, for a fee, to test them and their staffs for infection with the AIDS virus.

Maminta said the names of those who are free of the virus would be listed on a framed certificate. He said dentists could display the certificates in their offices so their patients will know they are being treated by a person free of the AIDS virus.

Maminta's service provoked strong criticism from Dr. Linda Fisher, chief health officer of St. Louis County and an expert on AIDS and AIDS testing.

Fisher said Maminta was "capitalizing on fear."

"I see no use, no legitimate need for such a service," Fisher said. "Dental employees are not in danger of giving AIDS to their patients."

According to the federal Centers for Disease Control, no dentist or other health care worker has been found to

See AIDS, Page 8

Former Klan Leader Wins Legislative Seat In Louisiana

NEW ORLEANS (AP) — David Duke, a former grand wizard of the Ku Klux Klan, narrowly defeated John Treen to win a seat Saturday in the Louisiana Legislature after a campaign peppered with charges of racism.

Duke had 8,456 votes, or 51 percent, and Treen, a longtime Republican ac-

cans in the runoff election.

Duke hailed his victory as "the greatest upset in the history of Louisiana politics."

"I don't think there's been a candidate in recent history who has been more attacked, slandered, lied about and hurt in the way I was hurt, and our good people were hurt, in this campaign," he said in a victory speech.

Duke, 38, and Treen, 63, battled it

Treen said he would demand a re-

See DUKE, Page 7

SUNDAY

WEATHER

Partly Sunny

Forecast for St. Louis:

Today: Considerable cloudiness through tonight with light winds. Drizzle possible late tonight. High 41. Low 35.

Monday: Rain likely Monday, changing to snow Monday night. High 40.

Other Weather on Page 2A

INSIDE

NEWS ANALYSIS

THE SHIFT ON CIVIL RIGHTS

Third Of A Series

The Reagan administration allowed the University of Missouri and other colleges to ignore desegregation goals, reversing long-standing federal policy. The third of an intermittent series examines a failed effort to increase black representation on the Columbia campus and elsewhere.

PAGE 1F.

FEATURES

Young Girl's Journey

After a lifetime of translated letters, Nicola Hudson, 13, made the long trip from St. Louis to Vietnam to meet her grandmother, aunts, uncles, cousins and other relatives.

PAGE 1H

SCORES

NHL

Montreal 4 ..... Blues 2
Toronto 5 ..... New Jersey 3
Hartford 4 ..... Minnesota 3
NY Islanders 3 ... Philadelphia 2
NY Rangers 5 ..... Pittsburgh 3
Boston 4 ..... Calgary 3
Los Angeles 11 ..... Quebec 3

NBA

Charlotte 119 ..... Indiana 114
Phoenix 120 ... Sacramento 101
Cleveland 118 Philadelphia 100
Golden St. 121 ..... Detroit 119
New York 125 New Jersey 115
Washington 98 . LA Clippers 93
Houston 105 ..... Dallas 94
Utah 107 ..... S. Antonio 93
Seattle 116 ..... Portland 115

College Basketball

St. Louis U. 62 Xavier (Ohio) 61
Wisconsin 72 ..... Illinois 52
NW Missouri St. 80 ... UMSL 59
Oklahoma 106 ..... Colorado 88
Arizona 102 ..... UCLA 64
Georgetown 80 Bos. College 69
Iowa 99 ..... Minnesota 61
Iowa State 90 Oklahoma St. 81
Duke 102 ..... Kansas 77
Syracuse 87 ..... Providence 80
Memphis St. 89 .. Florida St. 78

LEGACY OF THE BOMB — ST. LOUIS' NUCLEAR WASTE

Waste

From page fifteen

mits that the most up-to-date earthen storage containers would be effective for no more than 1,000 years and possibly for as few as 200 years. Critics doubt the containers would last much longer than 50 years.

Most of the nuclear waste in this area will remain radioactive for at least 4.5 billion years.

Some people view the health risks of low-level nuclear waste as less than acute. They say that to spend $700 million or more on cleanups in the area would be a misuse of money. And they contend that society's resources could be better used on more pressing matters — perhaps educating people about the dangers of alcohol or drugs or lowering the infant mortality rate.

Said Dr. Henry Royal, director of nuclear medicine for the Mallinckrodt Institute of Radiology: "My fear is that society will spend more money than it should spend dealing with low-level radioactive waste."

But most scientists, citing health hazards, say the government must do what it can to contain the waste.

Even the Energy Department, which constantly downplays the health threats, insists that the material must be cleaned up.

Andrew Avel, an Energy Department manager at Oak Ridge, Tenn., said that although radioactive sites such as the closed-down Berkeley ball fields are not now much of a hazard, they could be if someone grew food or built houses there.

"We don't know what will be out there in 200 to 300 years," Avel said.

So, the Energy Department is trying to clean up the old Mallinckrodt plant in north St. Louis and various North County sites at a cost exceeding $250 million.

And it already has embarked on a 12-year, $400 million cleanup at the old uranium plant near Weldon Spring in St. Charles County.

The Energy Department won't touch the highly radioactive West Lake landfill in North County or 40 waste-burial pits at Hematite in Jefferson County. Those sites come under the purview of the Nuclear Regulatory Commission.

Here is a rundown of the agency's cleanup activities in the metropolitan area:

At Impasse With The City

The Energy Department has proposed building an earthen bunker to store 925,000 cubic yards of waste on some 80 acres of land now owned by the city of St. Louis.

To make this possible, the Energy Department wants the city to deed back the 21.7-acre site where the government first buried the first nuclear waste from Mallinckrodt. The government gave the land to the city in 1973.

The Energy Department also wants the city to deed over another 60 acres of adjoining land.

Buried in the bunker would be:

- About 250,000 cubic yards of contaminated material from the original airport site, off McDonnell Boulevard, north of Lambert Field.
- About 211,000 cubic yards of contaminated material from Latty Avenue, including two large mounds covered with green plastic on the property of Futura Coatings Inc.
- About 337,000 cubic yards of contaminated material that seeped, blew and leached from the airport storage site and Latty Avenue into nearby ditches, ballfields and Coldwater Creek.
- About 127,000 cubic yards of contaminated material from the Mallinckrodt property in downtown St. Louis.

But so far, the St. Louis Board of Aldermen has refused to go along with the plan.

Mary Ross, chairman of an aldermanic committee on radioactive waste, says a history of federal secrecy and doubletalk are why the aldermen want to retain control over the site.

"If we trusted the Department of Energy, we probably would have signed a deed a long time ago," Ross said.

Energy Department officials have threatened to pull out of the cleanup effort unless the city agrees to turn over land for a bunker.

In that event, they say, the city might wind up liable for damage claims or cleanup costs.

In Search Of A Rural Site

Alderman Ross and her colleagues are not alone in opposing the Energy Department plan.

Other local governments — including St. Louis County and several North County municipalities — have called for moving the radioactive waste out of the heavily populated area.

Their solution would be a site in rural Missouri. It is unrealistic to expect other states to accept Missouri's waste, any more than Missouri would accept theirs.

Said Drey, the activist: "The radioactive waste should not be located in the center of our state's largest metropolitan area. I think all of Missouri's radioactive waste should be consolidated in one place, and that should be in Callaway County where we already have a nuclear power plant."

Two years ago, two state legislators from Callaway County responded to that idea by suggesting that the waste be put at Weldon Spring or in University City, where Drey lives.

Drey and others who want the waste taken away got a boost from Rep. Jack Buechner, R-Kirkwood. Buechner said Friday that he would file legislation requiring the Energy Department to examine possible sites outside the metropolitan area before requiring the city to turn over the airport land.

If a rural site could be agreed upon, the federal government probably would require the state of Missouri to share the cleanup cost.

There at least is precedent for this kind of solution.

Local officials in South Salt Lake, a suburb of Salt Lake City, Utah, won a prolonged battle to have radioactive material moved 85 miles to a remote site in the state. Utah paid 10 percent and the federal government 90 percent of the cost of the two-year cleanup, which was completed last June.

Cleanup Near Weldon Spring

A truce prevails in St. Charles County as the cleanup gets under way at the old uranium processing plant on Missouri Highway 94 near Weldon Spring.

Department of Energy officials have suggested storing the waste in an earthen storage container covering anywhere from 45 to 58 acres on the site.

Although most residents welcome the cleanup, they want assurances that the Department of Energy will do it correctly. One of their greatest fears is that radioactive dust from the demolition of 68 buildings at the plant may endanger the health of 2,300 students and employees at Francis Howell High School.

The school is a half-mile downwind from the old plant. Federal officials say the work will pose no threat.

In a building moved here from Ohio at a cost of $1.5 million, federal employees, construction workers and scientists plan how to proceed. Men in moon suits conduct tests to determine the extent of the contamination.

About four miles to the south is a nine-acre quarry filled with black water and about 10,000 truckloads of radioactive debris.

The quarry is less than one-fourth mile from the well field that supplies much of St. Charles County with drinking water.

Pending the outcome of geological and hydrological tests, federal officials are leaning toward moving waste from the quarry to the earthen storage container at the old plant site.

The cleanup of the plant and the quarry originally were expected to be completed at the end of the year 2010.

But Rodney Nelson, manager of the cleanup, said proposed cuts in the project's annual budget could double both the $400 million cost and the 12-year timetable.

That would make the cleanup of all waste in the St. Louis area — waste that began so innocently with the effort to develop the Atomic Bomb — a project of more than $1 billion.

Gerry Everding, a Post-Dispatch special correspondent, contributed information for this story.

Larry Williams/Post-Dispatch

Steve McCracken (left), deputy manager of the Weldon Spring cleanup, and Rod Nelson, manager of the cleanup, working in a trailer at the abandoned Weldon Spring plant.

Alderman Mary Ross
Distrusts Energy Department

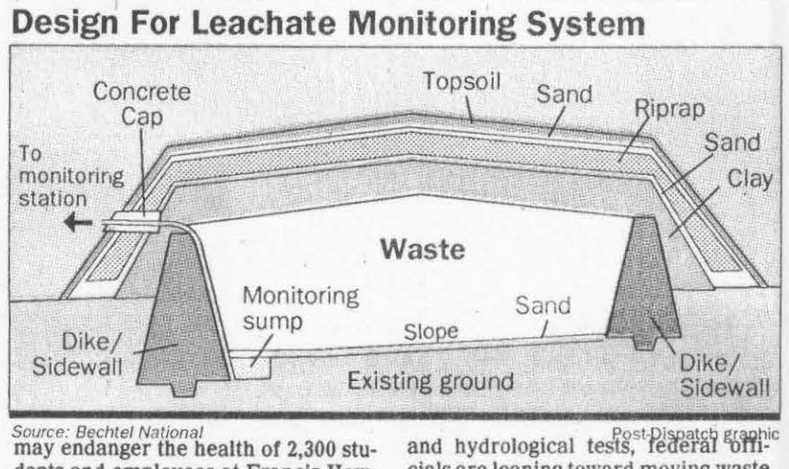
Source: U.S. Department of Energy — Tom Borgman/Post-Dispatch

Radioactive Waste Sites In The St. Louis Area

**– Vicinity sites includes Coldwater Creek and ditches, roads and ballfields in the area of the Latty Avenue site and the Airport storage site.*

Tom Borgman/Post-Dispatch

Design For Leachate Monitoring System



Source: Bechtel National — Post-Dispatch graphic

Readers May Direct Queries To Experts

Officials in various fields will answer questions Post-Dispatch readers may have about issues raised in "Legacy Of The Bomb: St. Louis' Nuclear Waste."

For more information about health studies financed by the Department of Energy, write Dr. Shirley Fry, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, Tenn., 37830.

Dr. Alice Stewart of Birmingham, England, also is trying to do studies that would include the Mallinckrodt workers. For information, write Dr. Jonathan Berger, Three Mile Island Health Fund, 622 Locust Street, Philadelphia, Pa., 19103.

Former uranium workers interested in obtaining their exposure records from the Department of Energy can write Jane Greenwalt, Department of Energy, P.O. Box 2001, Oak Ridge, Tenn., 37831-8501.

Officials with the Missouri Department of Health will respond to questions about health. The department also maintains a cancer registry. Write Mark Roebuck at the Department of Health, P.O. Box 570, Jefferson City, 65102.

Facts about individual waste sites in St. Louis and St. Louis County can be obtained from Andrew Avel, Site Manager, Department of Energy, P.O. Box 2001, Oak Ridge, Tenn. 37831-8723.

Details on the contamination in the Weldon Spring area will be provided by Martin Janowski, Community Relations Manager — Weldon Spring Cleanup, Route 2, Missouri Highway 94 South, St. Charles, 63303.

Environmental activist Kay Drey of University City also has information concerning the nuclear waste in the St. Louis area. She can be reached at 515 West Point Avenue, University City, 63130.

In St. Charles County, people who live near the abandoned uranium processing plant and want their wells tested can writeDaryl Roberts or Gale Carlson, Bureau of Environmental Epidemiology, Missouri Department of Health, P.O. Box 570, Jefferson City, 65102.

St. Louis County residents with health concerns can write Dr. Wayne Black, St. Louis County Department of Health, 121 South Meramec Avenue, Clayton, 63105.

Uranium Plant Off-Limits To U.S., Ohio Inspectors

The uranium-processing plant in Fernald, Ohio, is so contaminated by radiation that state and federal agencies have barred their inspectors from the plant.

The U.S. Environmental Protection Agency and its Ohio counterpart took the action last week after two federal inspectors became contaminated by uranium in December while attending meetings there.

Urinalysis showed the contamination. The inspectors suspect they either inhaled or swallowed uranium dust while in the plant.

The Fernald plant, 18 miles northwest of Cincinnati, has become a prime example of what can happen when waste from a nuclear processing plant poisons its environment.

It is expected to cost about $5 billion to clean up the mess at Fernald.

That's more than five times what federal officials estimate it could cost to clean up all the radioactive waste in the St. Louis area.

Some people fear that the cleanups at Fernald and nuclear weapons plants across the country will divert cleanup money needed in St. Louis, St. Louis County and St. Charles County.

The Fernald plant was opened in 1952 by the Atomic Energy Commission, with help from chemists and engineers at Mallinckrodt Chemical Works in St. Louis. Mallinckrodt's employees pioneered many advances in uranium processing.

In 1966, when the federal government closed its plant near Weldon Spring in St. Charles County, the uranium processing that had been done there was shifted to Fernald.

Since then, the Fernald plant has been the nation's sole source of uranium fuel for plutonium production and has been spewing nuclear pollution into the environment.

Ohio officials say that in the 37 years it has been in operation, the plant has released 298,000 pounds of uranium wastes into the air and 167,000 pounds of wastes into the Greater Miami River.

Another 12.7 million pounds of waste were put into pits, which may be leaking. And the plant's concrete storage tanks are cracked and leaking.

Leaking radioactivity has contaminated the Great Miami Aquifer, which supplies drinking water to about 2 million people in the Cincinnati area. The plant sits on the aquifer. Some privately-owned drinking-water wells nearby have been closed because of radioactivity.

Recent tests have turned up genetic deformities in small animals living around six waste pits and an incinerator at Fernald.

Two weeks ago, the U.S. Environmental Protection Agency asked for more tests to determine whether the contaminated water or tainted soil might be causing the mutations and, if so, whether people in the neighborhood might be at risk.

In December, a federal study recommended that Fernald be closed by 1994 to allow cleanup to begin. The cleanup is expected to take at least a decade.

Cleanup

From page fifteen

Energy said.

The budget proposal for the fiscal year that begins Oct. 1 also would cut the amount for the Weldon Spring cleanup in St. Charles County to $9.4 million, from the $15.9 million that had been requested by the Energy Department. The manager of the Weldon Spring cleanup has said such cuts in the project's annual budget could double both the $400 million total cost and the 12-year timetable.

Warren Erdman, Bond's top aide in Washington, said Saturday that Bush had asked, "What's hot in St. Louis?" as the presidential party was driving near the airport.

"You're driving past what's hot here," Bond replied, according to Erdman. "We have some big concerns about our nuclear waste problem."

Bond told Erdman that Bush "showed great concern about St. Louis' nuclear waste problems, and said he wanted to work with Missouri's congressional delegation to help get the (cleanup) job done."

Erdman said Bond planned to work on the Senate Budget Committee to "make sure the cleanup money is in the final budget" for the work at Weldon Spring as well as for the study of other radioactive waste sites in the St. Louis area.

Steve Hilton, a spokesman for Sen. John C. Danforth, R-Mo., said Friday that Danforth wanted to make sure that the cleanup of the radioactive waste sites in the St. Louis area "should be done as quickly, as efficaciously and as safely as possible." He said Danforth would support full funding of the cleanup efforts.

But some members of Missouri's delegation in Congress said Friday that the impasse between the Energy Department and St. Louis officials about ownership of the property north of Lambert that Bush glimpsed was the biggest barrier to cleanup efforts.

In the last few weeks, the Energy Department has been using what one area congressman called "high-pressure tactics" in an effort to persuade St. Louis officials to deed over about 80 acres of land near Lambert for a bunker to store the radioactive waste from that site, the Latty Avenue site and from Mallinckrodt Inc. property in St. Louis.

One of the Energy Department's tactics is to warn that if the Lambert and Latty Avenue sites are put on the federal National Priority List, or Superfund, the city would be liable to share part of the cleanup cost for those sites.

If the city deeds over the land, it would not be liable, officials said.

Thomas A. Villa, president of the St. Louis Board of Aldermen, said that officials from the Energy Department made that warning explicit during a recent meeting with city officials in St. Louis.

"The financial liability would certainly be devastating" for the city, Villa said at an Airport Commission meeting Thursday. Villa said he would back efforts to convey the 80-acre site to the federal government so the city could avoid the potential costs.

But Alderman Mary Ross, D-5th Ward, chairman of the Board of Aldermen's radioactive waste committee, continues to block that step. She says the board wants the city to keep control over the property because it does not trust the Department of Energy to keep its promises.

The Board of Aldermen will not meet again until April 17; no decision on the property deed is likely until at least then.

Meanwhile, Energy Department officials have told congressmen and others that they are pushing for the airport and Latty sites to be added to the Superfund list.

A regional official for the federal Environmental Protection Agency, which administers the Superfund, confirmed recently that the airport and Latty sites were being considered for the new Superfund list. But an EPA spokesman in Washington declined to give the status of the proposal.

The Weldon Spring site has been on the national priority list since 1987.

Meanwhile, Buechner said Friday that he planned to introduce legislation soon — possibly with the support of other members of Missouri's delegation — designed to give St. Louis officials "a little more breathing room" in making a decision on the property transfer at the airport site.

Buechner said his measure would require the Energy Department to complete the environmental review process at the St. Louis sites and also look at other sites for the bunker — either in Missouri or outside of the state — before the city could be required to turn over the airport land to the federal government.

AIDS

From page one

have infected a patient.

While not ruling out the possibility that such an infection can happen, the federal center says the likelihood is extremely remote.

The center does not recommend routine testing of health workers; neither do the Missouri and Illinois departments of health.

Routine testing of health care-workers such as dentists is opposed by the American College of Physicians and the Infectious Diseases Society of America.

Maminta said he was not surprised by the response of health experts. "I am sure the public health people will object," he said. But he said the service would offer peace of mind to patients and dentists.

Maminta said the idea of testing dentists and their staffs for the AIDS virus occurred to him last year after Washington University's School of Dental Medicine expelled a student because he was infected with the AIDS virus.

He said that if he were a dentist and learned that an assistant was carrying the virus, he would bar the employee from treating patients.

According to the American Dental Association, infected dental workers can treat patients as long as standard precautions — to be used by all health workers, whether infected or not — are followed.

Maminta said he would not offer counseling along with his testing. "That is not my area of expertise," he said.

This alarms an official of the Missouri Department of Health.

Hilda Chaski, a high-ranking official involved in AIDS programs, said state law requires that counseling accompany testing. Counseling, she said, "is vital."

In counseling, individuals are told how they can eliminate the risk of infection with the AIDS virus or the risk of infecting someone else.

All health groups, from the World Health Organization to the St. Louis Department of Health and Hospitals, agree that counseling is the best tool for preventing the spread of AIDS.

Maminta also said that he would not report the names of infected people to the Missouri Health Department. "I don't think it is a reportable disease," he said.

But Chaski said that infection with the virus that causes AIDS was a reportable disease and that Maminta was obligated by law to disclose the names.

"Missouri AIDS laws offer Missouri citizens protection in situations like this," Chaski said.

Both Chaski and Fisher said that the certificates were misleading as well as unnecessary.

While the dental workers might have been free of the AIDS virus on the day of the test, they may become infected on the following day.

Also, infection by the AIDS virus cannot be detected until weeks or months have passed after the original exposure to the virus.

"It's much tc olistic an approach," Chaski

Chaski, like F aid dental patients need not IDS infection from their dentists because of universally adopted safety precautions.

Maminta defended the idea of naming uninfected dental workers on certificates that patients can review.

"I am not saying they will forever be free" of the AIDS virus, Maminta said. "At least it will give some peace of mind."

Maminta said that if he got much response to the 100 letters sent out last week, he would offer his service to every dentist in the area.

Blood samples for the tests would be taken in the dentists' office. The fee for the first office employee is $100, $75 for the second and $50 for each following person.

Private physicians charge comparable fees, but free testing and counseling for the AIDS virus is offered by the Metropolitan St. Louis AIDS Program in St. Louis and at other sites around the state.

The virus that causes AIDS (acquired immune deficiency syndrome) is transmitted by sex and the sharing of blood, typically when drug users share syringes. It can also be transmitted by a mother to her unborn.